

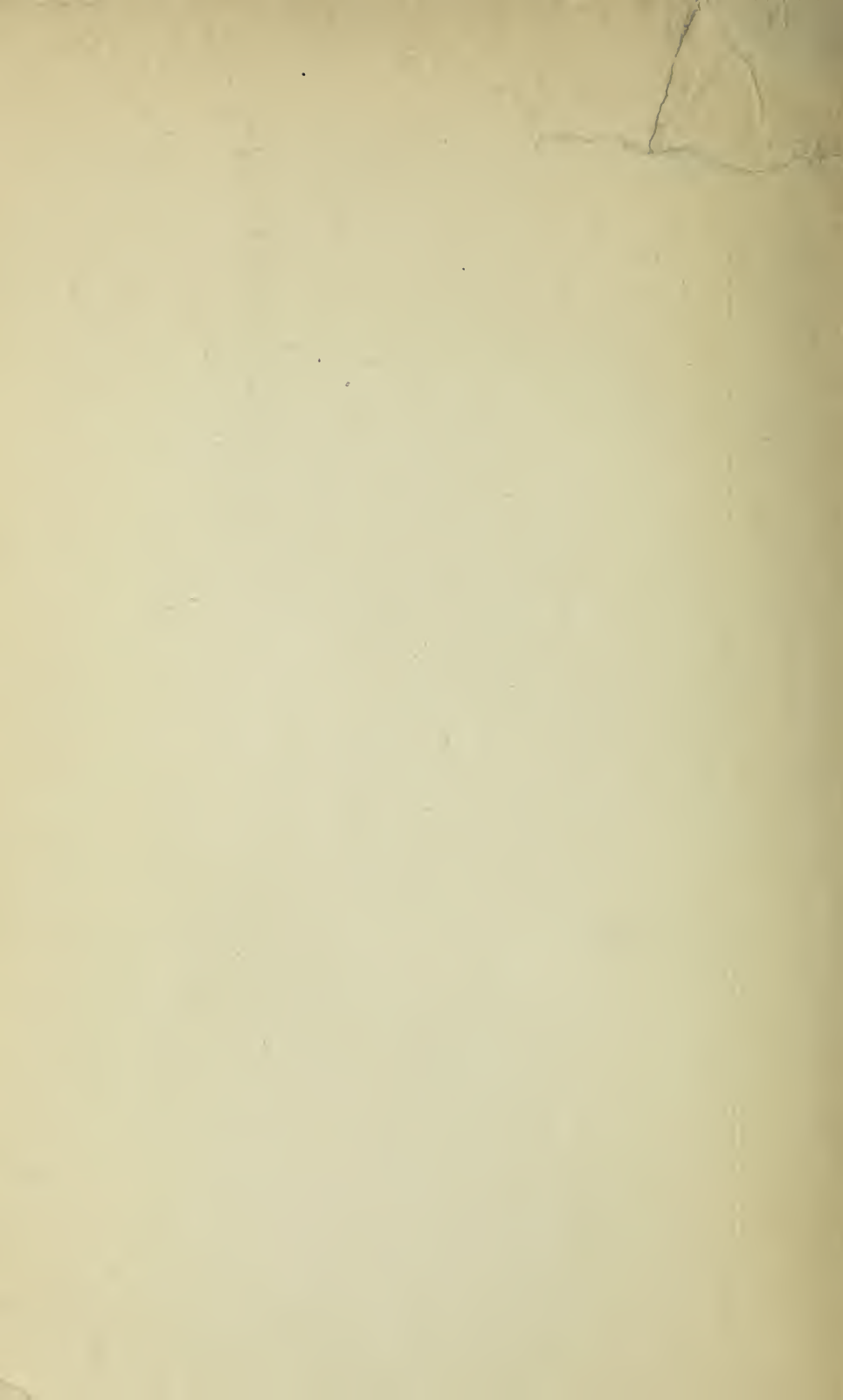
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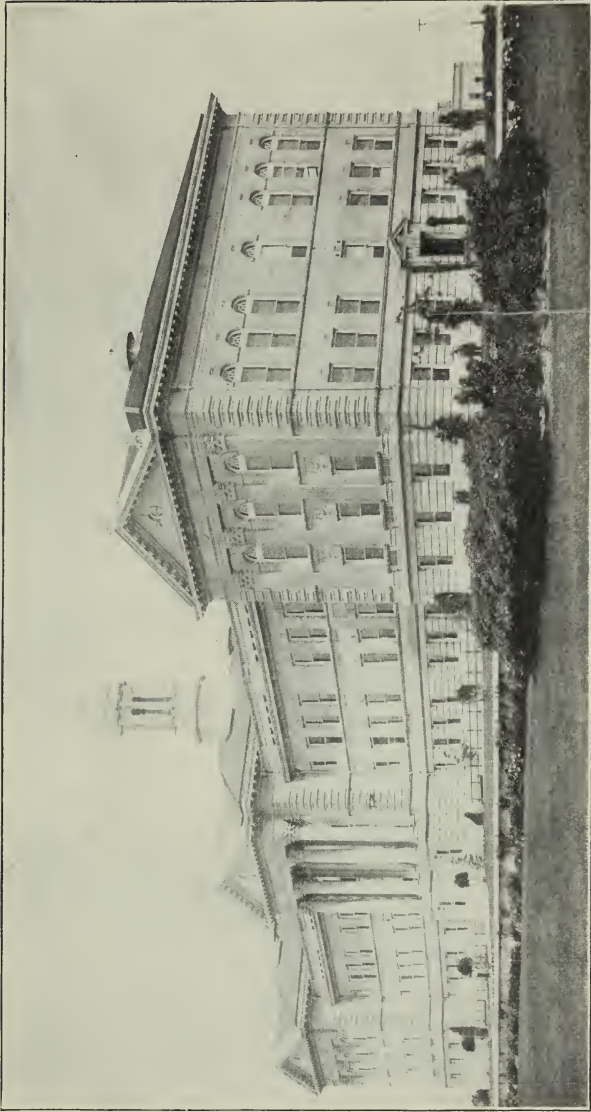
THE
COURSES OF STUDY
IN THE
WESTERN ILLINOIS
STATE NORMAL SCHOOL

AT
MACOMB, ILLINOIS.

THE LIBRARY
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—1907—





Course of Study

of the

Normal Elementary School


of the

Western Illinois State Normal School

Macomb, Illinois.



—1907—



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A. B., Leland Stanford Jr. University, 1895; A. M., 1897; Student University of Leipzig, 1897-'08; Student Christiania, 1898. Professor of Mathematics, Las Vegas, N. M. Normal University, 1900-'01; Professor of Mathematics, Greeley, Colorado, State Normal School, 1901-'06.
- OLIVER M. DICKERSON**, *Head Instructor. The Art of Teaching History.*
Diploma Illinois State Normal University, 1899; A. B., University of Illinois, 1903; A. M., 1904; Ph. D. 1906; Fellow in History, University of Illinois, 1901-'04; Thayer Scholar, Harvard University, 1904-'05; Fellow in History, University of Illinois, 1905-'06. Teacher of History, Illinois State Normal University, 1904-'05-'06, and in the University of Illinois, [Summer] 1906.
- WILLIAM J. SUTHERLAND**, *Head Instructor. The Art of Teaching Geography.*
Diploma Illinois State Normal University, 1892; Ph. B., University of Wisconsin, 1902; Student University of Chicago [Summer] 1903. Superintendent of City Schools, Charleston Illinois, 1901-'02.
- JOHN P. DRAKE**, *Instructor in Physical Science.*
A. B., Wesleyan University, Middletown, Conn., 1894; A. M. 1895; Student Biological Laboratory, L. I., [Summers] 1895-'96; Student University of Wisconsin, [Summer] 1897; Student University of Chicago [Summers] 1898-'99. Teacher Science, Moline, Illinois, High School, 1898-1902.

JOHN T. JOHNSON, *Instructor in Biology.*

Diploma Illinois State Normal University, 1902; A. B., University of Illinois, 1906; Student in College of Agriculture, University of Illinois, 1904-'06. Teacher of Biology, University of Illinois Academy, 1902-'06.

SUSIE B. DAVIS, *Instructor in Reading.*

A. B., Milton College, 1898; A. M., 1905. Graduate School of Oratory, Northwestern University, 1905; Supervisor of Reading and Physical Training, Adrian, Michigan, 1905-'06.

MAUD SHAMEL, *Instructor in Music.*

Diploma Springfield Teachers' Training School, 1897; Supervisor of Music, Ironwood, Michigan, 1903-'05; Supervisor of Music, Oshkosh, Wisconsin, State Normal School, 1905-'06.

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Supervisor of Drawing, Galesburg and Galva Schools, 19 -1907.

LOUIS H. BURCH, *Instructor in the Manual Arts.*

Diploma Cook County Normal School, 1896; Critic Teacher, Chicago Normal School, 1901-'03; Instructor in Manual Arts, University of Wisconsin, [Summer] 1905.

EVA COLBY, *Instructor in the Household Arts.*

Diploma Boston School of Domestic Science, 1904; Student University of Chicago, 1905-1906; Director of Domestic Science, Hackley Manual Training School, Muskegon, Mich, 1904-'05; Freeport Schools, 1906-'07.

NINA B. LAMKIN, *Instructor in Physical Culture.*

Graduate of Champaign Illinois High School, 1889; B. L., University of Illinois, 1893; Teacher's Certificate in Physical Training, Harvard Gymnasium, 1897; Physical Director, Jewish Manual Training School, Chicago and Riverside Public Schools, 1903-'07.

MARTHA J. HANNA, *Instructor in Latin.*

A. B., Monmouth College, 1901; Student University of Chicago, 1903; Student Western Illinois State Normal School, [Summer] 1905.

CHARLES A. BARNETT, *Director of Athletics.*

Ph. B., Ottawa College, 1901; A. M., University of Kansas, 1907; Director of Athletics and Instructor in Drury College, 1904-1905; Coach, Haskell Indians, 1906-1907.

CORA M. HAMILTON, *Head Training Teacher.*

Supervisor of Primary Grades in city schools, Bloomington Illinois, 1902-'03.

MABEL CARNEY, *Training Teacher; District 56, McDonough County.*

Student Northern Illinois State Normal School, 1901-'02; 1903-'04; Student University of Illinois, [Summer], 1905. Teacher in Districts No. 20 and 23, Putnam County, 1904-'06.

CAROLINE GROTE, *Training Teacher in Ninth and Tenth Grades.*

Student Carthage College, 1897-'98; County Superintendent of Schools, Pike County, Illinois, 1898-1906.

LOIS COFFEY, *Training Teacher Seventh and Eighth Grades.*

Diploma Kansas State Normal School, 1900; Latin Diploma, 1905; Student University of Illinois [Summer], 1906. Teacher of History and English, Macomb High School, 1904-'06.

BLANCHE E. CAMPBELL, *Training Teacher, Fifth and Sixth Grades.*
Critic Diploma, Oswego, N. Y., State Normal School, 1902; Student
University of Chicago, 1901; Student Teachers College, Columbia, [Sum-
mer] 1905; Student University of Chicago, [Summer] 1906. Training
Teacher, State Normal and Industrial School, Milledgeville, Georgia,
1903-'06.

LILLIAN C. BERGOLD, *Training Teacher Third and Fourth Grades.*
Diploma Springfield Teachers' Training School, 1901; Student Heidel-
berg, 1903; Ph. B., University of Chicago, 1906. Teacher of Primary
Grades, Edwards School, Springfield, Illinois, 1902-'04.

BERTHA M. BENTLEY, *Training Teacher First and Second Grades.*
Diploma Hasting, Mich., High School, 1890; Ypsilanti Normal School,
1892; Graduate Student, Ypsilanti, 1898; Student Teachers' College,
Columbia, 1902; Critic Teacher, Primary Grades and Kindergarten, 1903-
1906, and Supervisor of Manual Training, Summer Term, 1906, Cheney,
Washington, State Normal School.

MARGARET DUNBAR, *Librarian.*

B. L., Monmouth College, 1896; B. L., S. University of Illinois, 1902.

FANNY R. JACKSON, *Assistant Librarian.*

A. B., Rockford College, 1896; B. L. S., University of Illinois, 1903; As-
sistant Librarian, University of Illinois, 1903-1907.

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THE MILITARY TRACT

WESTERN ILLINOIS STATE NORMAL SCHOOL.

The Western Illinois State Normal School was established by virtue of an Act of the General Assembly approved April 24, 1899. It was located at Macomb, McDonough County, August 14, 1900, in accordance with the provisions of the Act directing the trustees to "locate the same in the place offering the most advantageous conditions, all things considered, as nearly central as possible in that portion of the State lying west of the fourth principal meridian, in what is known as the "military tract."

The school site, presented to the State by the citizens of Macomb, contains nearly sixty acres of land, and the campus is not excelled in beauty by any in the State.

The building is one of the finest and best adapted to Normal school purposes in the world. The corner-stone was laid December 21, 1900. School was opened in the unfinished building, September 23, 1902. The sixth year's work will begin October 1, 1907. The object of the school is "to qualify teachers for the common schools of this State by imparting instruction in *the art of teaching* in all branches of study which pertain to a common school education, and such other studies as the board of trustees may from time to time prescribe."

THE ORGANIZATION OF THE SCHOOL

At a regular meeting of the Board of Trustees held at Macomb, June 7, 1906, the following general plan of organization was adopted:

The school is organized in three divisions:

I. THE NORMAL SCHOOL.

II. THE NORMAL ELEMENTARY SCHOOL.

III. THE ACADEMIC SCHOOL.

The classes in the Normal school are designated as "Junior" and "Senior."

The Elementary school is organized and conducted as a com-

plete common school with two or more classes in each of the grades. It is intended to serve as a model school of observation and criticism for junior students, and a school of practice for the advanced student teachers. There is also a model ungraded school connected with this division.

The Academic school corresponds to the 11th and 12th grades in a common school, or the third and fourth years of a good high school. It is organized for the benefit of students who do not have the advantage of a free high school in their home districts. In this division students not fully prepared for the Junior class of the Normal school may obtain the credits necessary for admission.

THE SCHOOL YEAR is divided into four quarters of twelve weeks each. For the convenience of teachers in service who may wish to spend part of their long vacation in study, the Summer quarter is divided into two terms of six weeks each.

EQUIPMENT

THE LIBRARY

The library contains about 7,000 bound volumes and is gradually and steadily growing, 2,000 volumes having been added since July 1907. The books are chosen with reference to the course of study and offer supplemental reading in all subjects taught in the school. It is primarily a reference library and the books are kept in the reading room and on open shelves in the stack room for the use of the students. However books not required for constant reference use circulate among the students for home reading, the collection of fiction, about 300 volumes, being chiefly used in this way. Seventy-five general and special periodicals are subscribed for annually. The Chicago Daily Tribune, the Chicago Record-Herald, the New York Tribune Tri-weekly: and some local newspapers are on file in the reading room.

THE LABORATORIES

Laboratories and work rooms for biological studies, physics, chemistry, geography, manual training and drawing are all well located with an abundance of well lighted room. Each is equipped with a supply of the most substantial and usable apparatus and materials for a high grade of work in these subjects. Plans for further development, including a fully equipped laboratory

and work room for domestic science and art, are under process of development where these subjects will be taught in accordance with the most modern aims and methods.

THE SCHOOL GARDENS

Two acres of land have been set aside upon the Normal grounds for the development of school gardens. Here both the students of the Normal School and the children of the Training School will find opportunity for extended work in a first hand study of many valuable phases of nature. The gardens will be developed from the standpoint of educational values. All work will be planned with a specific purpose in view and with the greatest care. It is believed that results of this work will be of far reaching value.

THE PEDAGOGICAL LIBRARY AND MUSEUM

A pedagogical library and museum is in process of development. The library phase is intended to furnish first hand acquaintance with the best and most recent text books and books supplementary to the work of the elementary school. The leading publishing houses are placing sets of their books here for examination and trial. These form a valuable source of materials for criticism, for estimating relative values, and for subject matter itself.

As fast as possible, collections are being made of bulletins, pamphlets, charts and pictures bearing upon every large interest of life. There are now over 2,000 pictures in the Training School collection and the number is constantly growing.

Several of the departments of this school already have much material for first hand study,—mineral collections, biological specimens, geographical materials, a collection of Indian pottery, manual training exhibits, art collections, and numerous products showing the evolution of various industries. Several cabinet collections illustrative of important industrial processes have been secured and others will be added from time to time.

New and valuable school supplies and devices are obtained and tested so far as possible. The aim is to add the most recent publications and productions that are worth while as soon as they are placed upon the market, thus keeping the prospective teacher in close touch with the latest and best text books, supplementary reading, teaching materials and school supplies.

PURPOSES OF THE TRAINING SCHOOL

IN RELATION TO THE NORMAL SCHOOL

The Training School, consisting of the first ten public school grades, forms an integral part of the Normal School. It serves as a school of training for students studying the principles and art of teaching through observation, criticism and participation in its work. In the development of the Normal School, the Training School serves a threefold purpose, namely:

1. An opportunity for training students who have sufficient foundation in the practical work of the school room, giving them practice in the solution of the daily problems of teaching and management, under the supervision of expert training teachers in co-operation with teachers expert in subject matter and the pedagogy of the special subjects.

2. In this department are tested the validity and efficiency of methods and conclusions developed in other departments of the Normal School. The department serves, therefore, as a testing laboratory for the products of the institution and assures a line of work designed to meet practical and practicable needs.

3. The Normal School stands for advanced thought in education. The Training School serves as a kind of educational experiment station for investigation and research, where advanced thought may take concrete form and where both children and student teachers may derive the benefits of all improvements and advances in school work.

All that is said of the graded elementary school is likewise true of the ungraded country school, maintained as an integral part of the Training School, save such adaptations and modifications as are necessitated by rural conditions.

AS A TYPICAL ELEMENTARY SCHOOL FOR WESTERN ILLINOIS

While existing solely as a functional part of the Normal School in realizing the preparation and training of teachers for the public schools, the most fundamental factor in determining the character of the Training School is to make it a school typical of the school needs of this environment. In any elementary school, there should be represented, in so far as possible, the dominant life interests of the community itself and the larger relationships to the world as a whole, past and present. The work which teachers observe and in which they participate

in our school must be typical of that which they may reasonably hope to accomplish in the communities to which they go. Our highest aim is to make the work thoroughly practical and in conformity with the immediate problems and needs of the environment, and at the same time develop and establish ideals towards which all schools may move, assuring progress from good conditions to better and working with a constant hope of attaining the best.

In equipment, we are trying to make our rooms, lighting, sanitation, decoration, seating, maps, models, sand tables, libraries, collections of pictures, pedagogical museum, text books, school gardens, manual training and domestic science and art materials, and all other elements of physical equipment typical of what any school, rural or urban, might hope to secure, commensurate with its needs, by careful and judicious planning at a reasonable cost in money and effort.

Both in content and method of development, we offer this course of study as one which we believe to be well adapted to elementary school needs and conditions in Western Illinois.

PRINCIPLES OF ORGANIZATION

The organization here employed involves two basic principles, namely:

1. The curriculum of the school must be brought into harmony with the needs and interests of present day life in our own immediate environment and of the world at large, the *social* basis.
2. The work, at any given stage of the child's development, must be that which is best adapted to the greatest enrichment of his life as determined by his ability and capacity in relation to his individual needs, the *psychological* basis.

These two principles imply two corollaries which it is worth while to state explicitly, namely:

1. The school must become really *democratic*, must provide material and means for the development of the *concrete* thinkers, the pupils who can manage *things, affairs* and *men*, the pupils of *action*, as well as for the *abstract* thinkers, the pupils who manage *ideas* and think easily in terms of symbols. Schools have been unfair in discriminating against concrete thinkers and have developed a selection of abstract thinkers for the upper grades through programs and forms of work uncomfortable and even un-

profitable for a majority of the children who should be participating in school advantages.

2. The method of procedure must be typical of the activities and the life making up the civilization of today, must be through active participation in the processes of real life as this life maintains itself in our time and as it has developed in its evolution from simple beginnings.

Social evolution in all its phases from the simplest vocational activity to the highest form of religious expression, has produced a social situation with which the traditional school is out of harmony. Not only is the traditional school unresponsive and inadequate to the social demands of our time, but it is consistent with the nature of the child mind and its development as we know these through the accumulated studies of recent years. Both of these factors, response to social needs, and response to the requirements of the child's mental growth, must function in the organization of our schools. On this basis, every element in every subject of study is measured by its place in supplying a real need appreciated by the child and within the range of his capacity. Insight into the industrial and institutional life of today, appreciation of our place in this life, a sympathetic knowledge of the evolution of this life through our participation in it and in the processes which have marked its becoming,—these are guiding ideals.

Primary emphasis is placed upon the mutual interdependence of the members making up the social group. The classes themselves, with their teachers, become co-operative groups for the solution of real problems presented by real situations.

Emphasis is to be observed upon the industrial, commercial and economic aspects of the subjects of study. We have no fear of the term utility as a foundation principle. But it is also to be noted that these fundamental interests of all peoples of all times lead out into all the higher aspects of life and culture. All artisanship leads to art. Our study of the pottery industry, of which Macomb is a center, leads us to Greek decorative design, to an acquaintance with important historical knowledge of many peoples, and to numerous sources in literature. Geography and nature study, though emphasized in their economic aspects, can not fail to lead through principles and mysteries to an appreciation of the infinite.

Closeness of organization is essential to our plan. All subjects in their proper relationship demands correlation of subjects, correlation of school with life, correlation of the past with the present.

The work of preparing this course has been done very largely by the co-operation of the entire faculty of the Normal School. The course has been found workable, and is believed to be in harmony with much of the best educational thought of our day. To be sure, it is believed that many changes in detail—perhaps even in important elements of the plan as a whole—will be found advisable in the further development of our work. The last word has not been said in any phrase of pedagogy, and frequent revision of various features of the work will be wise and are to be looked for so long as many questions are so largely tentative. But with these reservations and under existing circumstances, the course is presented as our best solution of the general problem to serve as a working basis until time and research shall enable us to offer a more nearly permanent plan.

THE CURRICULUM—AIMS OF WORK AS A WHOLE

ENGLISH

Mastery of the mother tongue is fundamental to all work. In the elementary school, the aim in English is to develop ability to speak and read and write the language with freedom, clearness and correctness. Language is the expression of thought. To have something to express is the first factor. Rich thought content is the basis of all language work which counts. All subjects of study are, therefore, tributary to English. If expression is not clear it is usually made so by clarifying thought. As occasions arise, the child is taught, by usage, the simpler rules of composition, capitalization, punctuation, etc. The meaning of forms is taught as needs demand and there are gradually developed the basic principles of language structure—proper usage with such generalization as pupils can appreciate. Technical grammar study is deferred until the last quarter of the eighth year and the work at that time is largely an organization of the facts and principles developed through earlier years. Technical grammar is difficult and fitted only for mature minds. In the elementary school it is the art of right usage rather than the science of technical relationships that is the aim. In reading our chief aim is the getting and

expressing of the author's thoughts and feelings. We insist upon much reading and that from the best sources and within the range of the child's interest and appreciation. The spirit, the joy, the author's thought and purpose, rather than technical considerations, are the elements emphasized. "To miss the joy is to miss all".

HISTORY

It is believed that the study of the conditions and activities which have marked the progress of man from his earliest and lowest estate to the civilization of today should begin as soon as the child enters school. History, regarded as the study of social life, continues through the first nine school grades. The purpose of this study in the lower grades is to awaken and develop a realizing consciousness of the meaning of the child's own activities and relationships. For this purpose, the conditions, activities, industries and occupations of the immediate environment are the basis of study for the first year. Social interdependence through these concrete illustrations is impressed in so far as the child can appreciate it. This work is followed by the use of a simpler society, that of primitive man, where the work all centers about the evolution of the more fundamental economic and industrial activities and the gradual development of other interests from these. For the same types of study through typical peoples, the third, fourth, fifth and sixth grades use, in their order, the Hebrews, Persians, Greeks, Romans, and the peoples of Mediaeval Europe down through early English history to the discovery and early settlements of America. Steps in progress are the basis of selection of materials. Close correlations with geography and with the manual arts are observed where they exist, and dramatization—living the experiences portrayed—are prominent in the method of study. The closing quarter of the sixth grade is devoted to the history of Illinois, leading back to the beginnings of colonial history. The seventh and eighth grades are devoted to American history and civil government. Federal government is taken up in connection with the adoption of the constitution, and state government in its relation to general government at the close of the eighth year. In the ninth grade, Ancient and Mediaeval history are taken up in the usual high school way but with much greater emphasis on the question of relative

values as a basis of selection of material than is usual. The purpose of history constantly urged is its aid in interpreting the life of our own time, its influence in shaping our conduct. Study of the past is justified only by the light it throws upon the present and the control it exerts in shaping the future.

GEOGRAPHY

In the study of geography, the aim is to acquaint the pupil with those phases of the earth's topography, physical conditions and place in the Solar System which bear most direct relationship to man's activities, and to impress clearly the meaning of these relationships. The study of the responses to conditions and of the life activities of races and peoples has a large place in geography. Through our dependence upon peoples of all lands, as shown by world commerce leading into world industries, the study of our wants and the means and sources of their supply carry us to every phase of geography worth while. The work bristles with cause and effect relationships. All work may be in relation to the development of large principles developed through the solution of many individual concrete problems. The influence geography has exerted upon history, and the changes wrought in geography by history correlate these subjects very closely. Industrial and commercial phases of geography often involve much work in manual arts and arithmetic. While all vitally related materials are properly coordinated, in geography study itself, life responses to geographic controls are the elements emphasized.

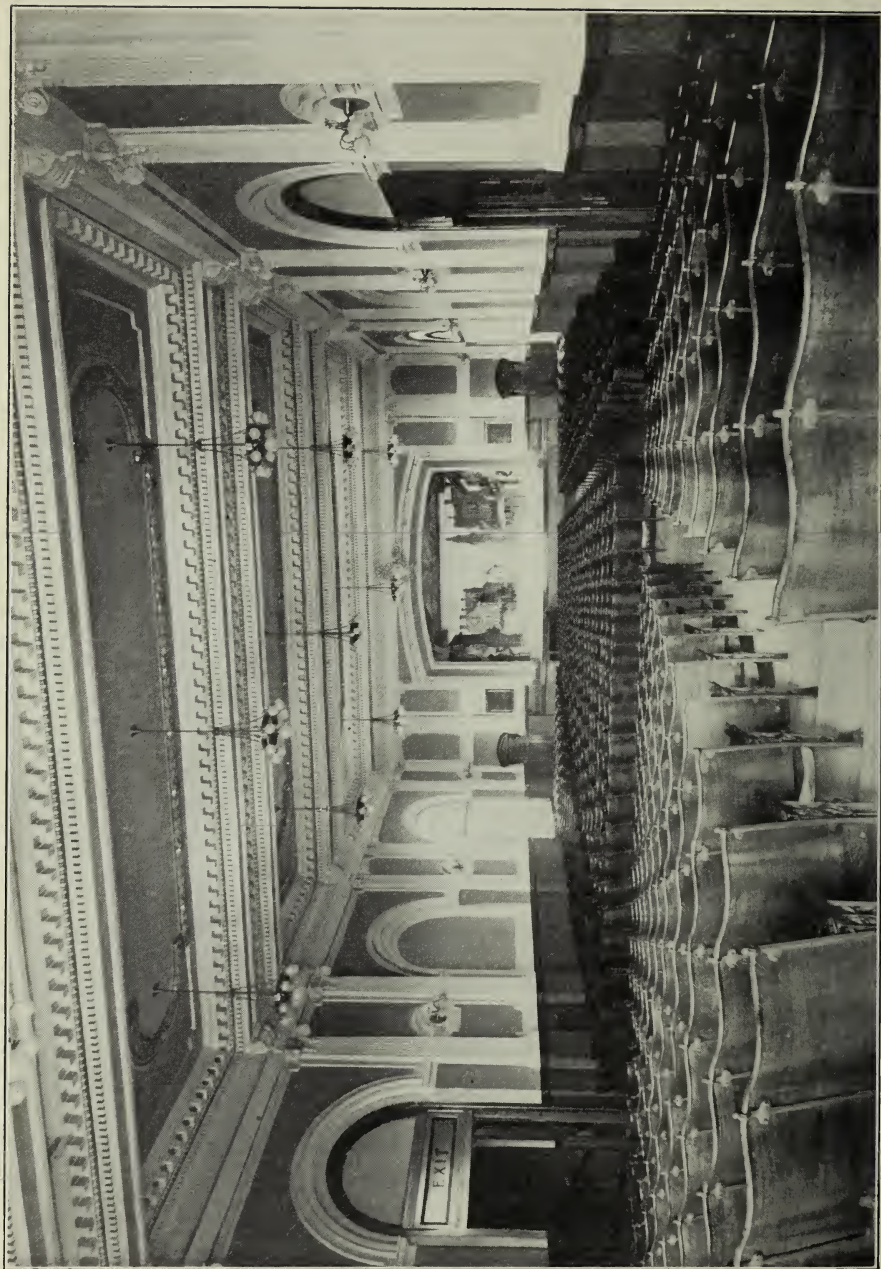
Home geography, in connection with nature study and history, make up the first three years' work. Geographic controls in relation to local occupations and industries are the basis. The fourth grade leads out to the larger industries of the United States and toward its close to a notion of the world as a whole. The fifth year covers a somewhat intensive study of North America. The sixth grade, emphasizing geographical principles as an end, utilizes South America for detailed study, with applications of principles developed to Europe, emphasizing elements also of historical and commercial importance. Asia, Africa and Australia constitute the materials for the seventh grade while a regional study of United States with its relation to our industries and through these to world regions on the basis of industrial relation-

ships is the work of the eighth grade. Physical geography by the laboratory method is given in the third quarter of the ninth grade.

NATURE STUDY

Nature study is vitally related to the geography and history study of our lower grades. Little differentiation is made before the fourth grade. Economic and aesthetic ideals are kept constantly in mind as bases for the selection of material. In biological studies, for example, species are selected which are beneficial or injurious rather than neutral; beautiful species rather than inconspicuous; common species rather than rare; species leading up to general principles are to be preferred; species brought in or inquired about are regarded as worthy. Nature study should aim to develop the knowledge and ability to control nature and make it minister unto the needs of man, on the economic side; on the aesthetic side, it should cultivate and develop a sympathetic appreciation of natural beauty in all its forms and lead the child so to love it that he will ever seek beautiful surroundings. Selection, then must be based upon real need and must grow out of the nearest and most vital home interests, leading over into the most fundamental fields of industry on the one hand and of art on the other. If usable knowledge of every-day importance, appreciated in relation to large human activities, and really aesthetic values are gained from the work, the moral and spiritual values will take care of themselves.

Relating the work as we do to life needs, both biological and physical phases receive due emphasis. As we hope definitely to arrange the work, we believe it will result in laying before the pupil the evidences, the factors, and the conclusions of the fundamental principles of natural development, both physical and organic, in such a manner that there will be developed in him a tolerant, open and scientific attitude of mind. While we have not yet arrived at a thoroughly satisfactory organization of detailed material for the grades on the basis of these principles, we believe the work suggested on the following pages in nature study is well graded and worth while. We shall have more to say on this subject in a future publication. In the ninth and tenth grades, the work becomes definitely divided between biological and physical science subjects.



THE AUDITORIUM



THE READING ROOM

MATHEMATICS

Throughout our work, the quantitative side of all subjects, the number relationships, receive due attention. Formal number work does not appear in the first or second grades and very little in the third, but the number relationships involved in hand work, nature and geography study, history and other work, are sufficiently emphasized as they are needed to make them usable and permanent. In the grades following, quantitative relations are constantly appearing which form the motive and basis for all arithmetic work taken up. Due attention is given to the number and sequence of processes and all are taken up as soon as the child is able readily to use them in solving the problems for which his work calls. Manual and industrial studies, games, nature study and other subjects furnish the motives and problems for most of the work. Enough drill work is insisted upon to make all combinations, tables and processes permanent. Number is not taught primarily as a mental discipline any more than history or geography, but for the same reason—to enable the child intelligently and efficiently to meet the needs of life in our time, to solve the problems which confront him in actual life.

MANUAL ARTS

The term manual arts comprehends all work involving the manipulation of materials. Three groups of activities, not distinct by any means but constantly overlapping, make the basis of our organization as shown below. Art is a form of expression comparable with English. Any of this work which functions must grow out of the child's experience and must result in response to a feeling of need for expression. Accomplishment is to be measured in terms of the child's growth. Adult standards are not to be forced upon the pupil. Motive, freedom of expression, growth in ability to see and appreciate and express details in their true relationships, these are the points of emphasis. Subject matter from other studies, for festal occasions, and from the environment is the source of motive and initiative. Creative work is encouraged and individuality thus developed. Children are taught to criticize intelligently their own work and to cultivate discriminating judgment through studies of master pieces within the range of their appreciation. Principles are taught through concrete studies

arising in the child's own work, and by reference to masterpieces of recognized excellence emphasizing the points in question.

In every project taken up, the thought side is the element of paramount importance, guaranteed, not only by critical attention to materials, tools and processes, but by relations to life interests and activities. Every piece of manual work should open up to the child a broad field of industrial or vocational activity and enable him to appreciate something of its meaning and of his relation to it. That the work may not degenerate into the mere making of things, we insist that as much as one half the time shall be given to the considerations of thought values.

All of the three divisions indicated below often contribute to the production of a single project. A given piece of furniture may be the subject of discussion in the course in household decoration; the design and plan will be made under the supervision of the teacher of drawing; and the finished product will be the result of work in the wood shop. The three fields constantly overlap and the three teachers work in close, unified cooperation.

Drawing and Modeling. Work in pencil, charcoal, crayon, water color paint and clay. All work of the elementary school is of the free, self expression type, save the mechanical drawings of designs and plans for projects. Motives are furnished in decorative design, illustration of stories and poems, scenes from history, landscapes, life forms in nature study, apparatus in experiments, and local life interests and activities. Creative efforts are encouraged. Studies of masterpieces in painting, sculpture and architecture form an integral part of the work, together with such study of the history of art and its masters as lies within the appreciation of pupils from grade to grade. To be able to know the good in art, and to appreciate and love it, are factors emphasized throughout the work.

Household Arts. Textiles, laundering, pottery, cooking and household decoration and sanitation are the most important phases of this work. Each phase of the work is studied in its relation to present day social needs and an intelligent understanding of the meaning and significance of each activity is emphasized rather than the development of great technical skill. Historical development, relation to large industries, sources of material, commercial processes, economic values, cultivation of taste and good judgment, self helpfulness, the economics of buying, and relations

to the home and family as an institution, are questions of large importance in this field of study.

Industrial Arts. Wood work, metal work, and allied industries. Wood construction in its manifold forms—house construction, furniture and cabinet making, vehicles, farm implements and tools, manufacturing machinery and tools, boat building, etc.; metal work in all its forms—in iron and steel, copper, bronze, brass, nickle, tin, lead, aluminum, etc.; and the large allied industries in connection with these—plumbing, painting, glass manufacture, work in brick and stone, printing, book binding, etc., together with sources of power, water, steam, electricity, etc.—these form the subjects of study in this field. Of course, but a few typical projects can be actually accomplished. But those selected may give an insight into and an appreciation of many large industries of vital importance. They should enable the pupil to see very valuable fundamental social relationships, and appreciate social obligations and social perspective. Each of these fields of artisanship will become so full of meaning that its dignity and worth will be appreciated and that its intelligent and creative workmen will be recognized as artists as well as artisans.

MUSIC

Music is taught as a form of expression in which the awakening and appreciation of feeling is a chief element. To do this, technique must be duly subordinated. The first aim is to get children to like to participate in the singing. Composition of simple melodies is encouraged from the beginning. Original phrases for the text are set to original musical phrases for the melody. Song topics are suggested by the children, and the real meaning of music is thus early appreciated, and creative ability stimulated and cultivated. Much care is given to the selection and gradation of music. The text for songs must be of standard literary value, the music of recognized excellence, each within the child's range of appreciation. Careful attention is given to ear training and to voice culture. Work is provided in both individual and group instruction. Much is made of festival occasions and program music. Appropriate studies in history of music are provided. A Training School orchestra and chorus are maintained. To learn to sing, to love and enjoy good music, and to develop good musical taste and judgment are the important aims.

FIRST GRADE
PHYSICAL EDUCATION

The daily program should provide systematic physical training for the child. This is not only to develop his strength and keep his body in such perfect health as to maintain normal, progressive growth and development, but also that grace in posture, carriage and action may be developed, as well as the disposition to enter with pleasure and profit the various recreations so necessary in any phase of successful life. To make adequate provision for this development, this course offers numerous periods of rest, games, gymnastics and calisthenics, outdoor athletics, and an extended course in general and personal hygiene. This latter work considers questions of dietetics, cleanliness, care of teeth and skin, fatigue, sleep, protection against contagion, treatment for accidental mutilations, and other items necessary to the care and preservation of a healthy body. Thorough individual physical examinations are made each year, and for children needing it, special corrective instruction is given. Studies in history occasionally suggest "Olympic" and other tournaments and the seventh and eighth grades constitute an "Indian Tribe" whose ideals are physical and moral efficiency. "Athleticism" is carefully avoided and the ideal of play for the joy of the playing is exalted.

GERMAN

Work has been begun by the "Natural" method in the third and fourth grades, and is to be carried upward through the succeeding grades, as these classes advance. Conversations, plays, games and stories in the language give the work real content and meaning. Pronunciation and vocabulary are thus developed while the mind is most responsive. Knowledge of construction is gained through usage. Reading is taken up toward the close of the first year's work.

OUTLINE OF STUDIES

GRADE I

ENGLISH

The work in this grade is largely oral. Reading is not begun until after the middle of the year. Dramatization is used extensively to develop freedom and initiative in expression and action.

FIRST GRADE

Stories, poems, songs, and oral work in all of the other subjects give rich thought content, occasion for expression, and extended practice in developing freedom and improvement in speaking. Careful selection has been made from among the numerous sources of material, and the classics which by long experience have been found most interesting to children are used. The following list contains many of the best. Not all are used, but from this suggestive list those are taken which best suit conditions at a given time.

Literature. To be told by the teacher and reproduced by children.

Stories.

Myths—Greek and Norse.

Bellerophon and Pegasus 1, 2-II, 3, 4, 15¹.

Phaeton 5.

Ulysses and the Bag of Winds 1, 2-I, 13

Siegfried's Childhood 8, 9, 16, 19, 21

Odin's Sacrifice 10, 15, 18, 20, 21, 22

Fairy Tale, Folklore and Fable.

The Ugly Duckling 14, 24, 26, 28, 30, 31, 32

Jack and the Bean Stalk 24, 26, 27, 33

Sleeping Beauty 13-II, 31, 33

The Straw, the Coal and the Bean 29-II, 30, 31

The Brave Tin Soldier 28, 32

The Discontented Pine Tree 30

Four Accomplished Brothers 32

How Six Traveled through the World 29-II

Elves and the Shoemaker 32

The Frog Prince 29-I, 32, 34

The Three Pigs 25, 27

The Three Bears 25, 26, 27, 30, 33

Little Red Riding Hood 24, 26, 27, 30, 33

Five Peas in a Pod 28, 35

How the Woodpecker Got Its Red Head 5

The Boy and the Wolf 24

The Dog and His Shadow 12-I

The Dog in the Manger 12-II, 24, 27

The Man, the Sun and the Wind 27

¹Numbers refer to books containing stories and poems. A full list of books with publishers forms an appendix at the close of this book.

FIRST GRADE

Process Stories.

- The Old Woman and Her Pig 30
- Chicken Little 35
- The Gingerbread Man 71
- The Hen and the Grain of Wheat 35
- Three Little Goats Gruff 13-I

Bible and Hero Stories.

- David and Goliath 36, 37
- Joseph 36, 37
- The Christ Child 38
- Cedric 39
- The Leak in the Dyke 42
- St. George and the Dragon 40
- Nahum Prince 3

Humorous Stories.

- Musicians of Bremen 30
- Santa Claus and the Mouse 3
- The Moon in the Mill Pond 41

Poems.

- September, one stanza—H. H. Jackson 1, 5
- Mother Goose Melodies 9, 24
- Time to Rise 7, 10
- How the Leaves Came Down 1, 5
- Autumn Leaves 5
- October Gave a Party 5
- Singing—Stevenson 1, 10
- What Everyone Knows 3
- November 1
- My Shadow 2, 7, 10
- The Magic Vine 1
- Jack Frost 1.
- Christmas Song—Field 1
- 'Twas the Night before Christmas—Moore 1, 2
- New Year—Mullock 4
- A Million Little Diamonds 11
- Twinkle Twinkle Little Star 1, 2, 5
- The City Mouse and the Country Mouse—Rosetti 3
- The Cow—Stevenson 7, 10
- The Lost Doll—Kingsley 5

FIRST GRADE

- The Little Kittens 5
 I Love Little Pussy 3
 The Boy and the Sheep—Taylor 4
 The Drum—Field 6
 March—The Plan Book
 The Wind—Rosetti 3
 The Sun Beams—Poulsson 5, 7
 The Seed—Kate Brown 1
 How the Winds Blow—Spring, one stanza 5
 Chickens 1
 April 1
 Dandelion—Kate Brown 5
 Who Likes the Rain—C. D. Bates 5
 Rain—Stevenson 7, 10
 Apple Blossoms—Kate Brown 1
 My Garden Bed—Poulsson 8
 Merry Brown Thrush—Larcom 1
 What Does Little Birdie Say—Tennyson
 The Wonderful Meadow—Wadsworth, two stanzas 1
 The Elf and the Dormouse—Herford 4
 The Swallow's Nest—Edwin Arnold 4
 The Spider and the Fly, one stanza 1, 5
 A Little Boy's Walk—Poulsson 1
 Sunrise and Sunset 4
 The Duel—Field 2, 10

Songs. Connected with occasions, seasons and daily interests. See music.

Reading. Reading will not be taken up until children have had sufficient work in story telling, dramatization, conversations on numerous topics, and directed play, construction work and other physical activities to furnish a basis of interest and freedom of vocabulary and expression. For most children, this period will not be reached until near the last quarter of the year, excepting for those who have had extended kindergarten advantages. However, work will begin with groups as soon as they develop. The books used will vary, but will be chosen from among the following or others ranking with them in choice of material:

- The Holton Primer—Rand, McNally & Co., Chicago.
 First Year Language Reader—The Macmillan Co.,
 Chicago.

FIRST GRADE

Nursery Rhymes, Welch—D. C. Heath & Co., Chicago.

The Sunbonnet Baby Primer—Rand, McNally & Co.

The Outdoor Primer—Rand, McNally & Co.

Spelling and Phonetics. In connection with reading. Look and say method at first. Simple vowel sounds and single consonants, the more common phonograms, and the building up of families in phonics. Writing of simple sentences taken from other work.

Language. Use of capitals in beginning sentences and names of persons, and the pronoun I; use of the period and the interrogation point at close of sentences.

Reproduction of reading lessons and stories orally; stories reduced to a few essential statements reproduced in writing. Memorizing songs and poems. Telling of experiences and interests.

HISTORY

The aim in the work of the first grade is to make the child acquainted with his community as a social unit. It consists in a study of the principal occupations followed in the locality. Although it is not history in a technical sense, it is a preparation for the work following in history. It is designed to develop the child's appreciation of the mutual interdependence of the different members that make up the community as an industrial and social group. The social service performed by the father, the mother, the child, the grocer, the carpenter, the banker, the railroad, etc., are brought out clearly, as well as the ways in which these different units are remunerated for their activities. Pupils learn something of all the people who are employed in the local industries and of their places of business. The necessity of these occupations and professions is emphasized. Pupils see how the local society keeps itself going. They see how promptness, order, cleanliness and efficiency make for success and that carelessness, uncleanliness and laziness lead to failure. The products of the field, the dairy and the orchard are subjects of study; the relations which the interests and activities of the home and family bear to the general social interests are dwelt upon at length. The order to follow varies of course, with community interests. In each school that order of selection is best which leads from the known and familiar occupations to these more remote from the child's experience. In any case, the starting point

FIRST GRADE

is the same, namely, the home, for that is well known to all. From that as a center, the inquiry should extend to those occupations which supply the home, and from these to others from which they draw their supplies, and in this way lead the children to see the interdependence of all the members of the social group. Finally, the children compare the relative importance and necessity of the different occupations and consider which could be most easily dispensed with by a smaller community and a less complex industrial life.

The following list is suggestive only. In all cases the work should be planned to fit conditions as they exist. Occupations not here worked out in detail may be developed as those here given as types are outlined.

The Home.

- I. The Family. Emphasize interdependence in family life.
 1. Members: Father; Mother; Children.
 2. Occupations.
 - A. Work of mother: Washing, ironing, mending, canning and preserving fruits, baking, preparing meals, etc. Items listed; work actually experienced or appreciated through play.
 - B. Work of children: Carrying in fuel and water; running errands; helping with house work; etc.
 - C. Work of father:
 - a. About the house, as, care of garden, cow, etc.
 - b. Vocation: Lists of vocations of fathers of all the children.
- II. The House. The place of abode of the family.
 1. Materials: May be logs, wood, brick or stone.
 2. Parts: Hall, parlor, sitting room, dining room, kitchen, sleeping rooms. Uses of each part.
 3. Building the house. Workers needed in building the house is a consideration leading out into a large industrial group. The doll house built by the children emphasizes the above points.

The Industrial Group.

The mason, carpenter, plumber, painter, plasterer, paper

FIRST GRADE

hanger, furniture dealer, lumber dealer, dry goods store, hardware store, meat shop, bakery, blacksmith shop, drug store, hotel, harness shop, livery barn, barber, laundry, gas and electric light plants, shoe store, railroad, grocery store, book store, and others as the environment affords, always keeping in mind relative values in selecting types. As a sample treatment, the following outline for the grocery store is offered:

I. The Grocery Store.

1. By whom owned.
2. Location and general appearance.
3. Principal staples kept.
4. Tools and implements needed—scales, measures, etc.

II. Services Performed by the Grocer.

1. Care of store and stock.
2. Selling of goods: How sold; how measured.
3. Replenishing stock: Where procured; how transported.
4. Hiring and payment of employees.
5. Keeping account of money and books.

III. Interdependence of Grocer and the Community.

1. Value of the grocer's services to the people.
2. Dependence of grocer upon the people.
3. Importance of transportation to grocer and community.
4. Comparative value of grocer, farmer, dry goods merchant, etc.
5. Possibility of dispensing with the grocer.
6. Remuneration of the grocer.

IV. Ethical Ideas.

1. Importance of cleanliness, order, and honesty on the part of the grocer.
2. Importance of honesty and right relations on the part of the public with the grocer.

The Professional Group.

The doctor, lawyer, preacher, editor, teacher.

The Civic Group.

- I. The Post Office and the mail carrier.
- II. The city, village or town government.

FIRST GRADE

1. What the city does for us.
It provides roads, walks, water works, schools fire and police protection, public parks, etc.
2. What we do for the city.
We are the city. We pay taxes to support it; keep our lawns mowed; keep the streets clean; help the city to be sanitary by properly caring for animals and garbage; obeying its laws.

In all of the above work, excursions form an important part of the plan of study. Very little attention is given to that which can not be studied first hand. Play and construction work are an integral part of the plan.

GEOGRAPHY AND NATURE STUDY

The aim of this work is to lead to a better knowledge, and consequently to a better appreciation and love of nature. Intelligent contact with nature deepens and enriches the child's whole appreciative life. Study through excursions is emphasized because nature is then seen in true relationships. No line of demarcation separates work into geography on the one hand and nature study on the other. All nature material has a setting, an environment, and the life responses to this environment, together with the conditions of the environment itself, may be treated indifferently as nature study or geography in the lower grades.

In the fall and spring the bird and other animal life, and the flower and plant life of the campus and neighboring woods and fields will be studied. Ability to recognize some of the more common trees will be developed and one of these especially noted in its changes throughout the year.

In the school garden, a plot will be assigned to each child for growing flowers and vegetables. Such vegetables as radishes, lettuce, and onions will make up the first crop, while later other common vegetables and flowers will be planted, furnishing material for study in the following fall.

Some of the useful farm animals will be studied in connection with the study of farm life. Pets will be brought and cared for by the children and their habits studied through their care.

Window gardens are planted each year and the soils needed for their best growth will be studied. Transplanting and slipping will receive some attention.

FIRST GRADE

Weather records will be kept, and physical phenomena related closely to other interests and within the child's range of appreciation, will be studied as occasion offers.

Some studies in cooking will be made in connection with the study of some food products as, fruits and dairy products.

MATHEMATICS

At this age the child's experience with, and need of, quantitative knowledge is confined to a consideration of small groups of things and crude relations of size. Extended measurements are made in construction work, gardening and cooking; score keeping in games is taught; simple relationships between units of measure, as, pint and quart, foot and yard, peck and bushel, quart and gallon, are established; the meanings of one half, one third, and one fourth as amounts and operators within the limits of the child's capacity are taught as occasion requires. Drills are given on these simple relationships after meanings are known as occasion shows need for. Rich experience with quantitative relationships of things. No special periods for number work are assigned.

MANUAL ARTS

In this field, the work is so arranged that a definite sequence is provided in processes, using such projects as are needed in other subjects and interests, for the development of these processes. History, nature study, geography, festival occasions, etc., furnish the motives for the work. The place of each piece of work in its relation to the larger industry of which it is typical is emphasized.

Weaving: Mats, markers, rugs for furnishing doll house; made from raffia, grasses, straw, paper or corn husks.

Braiding and Sewing: Mat, bag, reins, curtains for doll house, using same materials as in weaving with the addition of cloth.

Cutting and Wrapping: Calendar, picture frame, basket, napkin ring, top, pen wiper, and pin cushion. Use cardboard, raffia and husks.

Measuring, Folding, Cutting and Fastening: Use paper, cardboard and wood.

Serviceable projects: Seed box, book, calendar, marker, bird house.

Illustrative projects: Model of farm house, fence, walks, barn

FIRST GRADE

wind mill, farm bridge, sled, cart, cupboard, table, bed, clock, doll house and furnishings; animal forms.

Drawing: Motives from nature study, occupation work, games, plays, stories, poses, etc. Designs for projects noted above. Use pencil, water color, crayon, ink, colored paper for cutting.

Modeling: Use sand table and clay. Make dishes, vegetables, domestic animals and relief work.

Picture Study and Study of masterpieces of other hand work. In all of the above work, masterpieces in each process will be studied as a means of helping to develop principles and for the sake of arousing interest and setting good copies, and also for the sake of cultivating appreciation of the good and the beautiful. Historical studies of masterpieces and their authors will be made as occasion suggests. In the field of picture study, about one picture a month in this grade will be given special attention. Such pictures as the following are suggested: Animal pictures from *Bonheur* and *Landseer*; Feeding Her Birds, *Millet*; The Escaped Cow, *Duprey*; A Fascinating Tale, *Ronner*; Can't You Talk, *Holmes*; The Shepherdess, *Le Rolle*; One or two Madonnas at Christmas time; etc.

Cooking: Preparation of simple luncheons for occasions and a study of such simple processes as naturally grow out of conditions and situations from day to day. Popping corn, making pop-corn balls, simple candy making. Setting of table, wiping dishes. Table manners. The social side of the work is here much emphasized and interest is developed in learning the meaning of as much as the child of this age can reasonably understand.

MUSIC

Care will be taken throughout the year to give adequate attention to the "hygienic development" of the children's voices and ears and not to overemphasize technique. The work is not to be made drudgery in any case but rather a source of enjoyment. Individual needs will be carefully attended.

Rote Songs. Chosen for beauty of song and musical expression. The rote song is to serve a three fold purpose:

1. To furnish foundation work for melody study and rhythm.

FIRST GRADE

2. To awaken an appreciation for the best in music.
3. To be, finally, the means of teaching the written symbols of music notation.

Syllable Songs. To teach syllables. Syllables of any simple rote song to be taught as a new verse.

Rhythm. A feeling for rhythm is development through the rote songs and syllable songs; also through beating, counting, clapping, marching or any other rhythmical exercises.

Tone Testing. For ear training. To be taught through the recognition of phrases and intervals of the rote and syllable songs.

Original Melody Work using verses and sentences, either original or selected. Motives from seasons, occasions and other work.

Scale Drills.

Program Music. Concerts using characteristic selections from all composers adapted to children of this grade. Concerts using rote song material taught during the year.

History of Music. In part through program music. One or two stories of composers chosen on the basis of the child's ability to appreciate. Simple stories of musical instruments.

Songs. The following is a list of typical songs suggested for use in first and second grades. The numbers refer to the books in which these songs are found, the list of books making up a part of the appendix at the close of this catalog.

When Little Children Sleep	5	Christmas Day	6, I
Morning Prayer	5	The Christmas Tree	5
Looby Loo	8	Salute to the Flag	1, II
Snail Game	8	Our Country's Heroes	6, I
Mother's Knives and Forks	1, I	Asleep and Awake	5
Left, Right	5	Spring is Coming	5
Mulberry Bush	8	Pussy Willows	6, I
The Frog	2	Valentine's Day	6, I
The Chicken	2	Cold Winds of March	6, I
The Whale	2	Little Gypsy Dandelion	5
The Apple Tree	5	A Prayer	5
Goody-By to Summer	6, I	Clapping Song	1, I
Jack Frost	6, I	The Owl	1, I
Jacky Frost	5	Tender Little Violet	1, I
That First Thanksgiving Day		The Moon Phases	1, II
	1, II		

FIRST GRADE

Milkweed Seeds	1, II	The Language Lesson	1, II
Lady Goldenrod	6, I	Pussy and Bow Wow	2
The Shoemaker	1, I	The Tin Soldier	2
The Blacksmith	1, I	Daisies	1, II
The Electric Light	1, II	The Tulips	1, I
The Rag Man	1, II	Gray Rain	5
The Farmer	10	Topsy Turvy	5
The Telegraph	1, III	The Ring	5
Under Their Blanket of Snow	6, I	Now the Day Is Over	5
Winter Lullaby	6, I	The Stepping Stones	1, II

PHYSICAL TRAINING

This is a period of great physical activity. The child is keen along motor lines. Imagination is strong. The aims are: To stimulate growth; to develop alertness; to give rest and joy through physical activity; to avoid strain.

Simple Concentration work: Commands with quick and accurate responses, as: Hands on hips—Place.

Rest position—Stand, etc.

Rythm Work: Rocking horse; Jumping Jack; Soldiers; Sailors, etc.

Two part exercises with clapping or snapping of fingers to emphasize rhythm. Running, skipping and hopping.

Games: Playing in the garden; Rabbit in the hollow; A trip around the world; Weasel and chickens; Center ball, etc.

Simplest Folk Dances, as: Stand in circle facing partners.

Courtesy to partners, 1-2-3-4.

Clap hands at sides, 1.

Clap hands together, 2.

Clap partner's hands, 1-2-3.

Join left hands and run around partners.

Repeat, 2.

Join both hands and run around partners.

Point fore finger of left hand, resting elbow in right hand in time of clapping, 1-2, 1-2-3; change right fore finger.

Join left hands, ladies kneel, gentlemen run around ladies.

Repeat, 8.

Reverse, 9, gentlemen kneel.

Repeat, 8.

Join both hands and run around partner.

SECOND GRADE

Courtesy.

Hygiene: Talks on cleanliness, neatness, care of person, correct habits in standing, walking and sitting.

GRADE II.

ENGLISH

The following list of selections for use in this grade is to be regarded as suggestive. Not necessarily all of these, but selections from these and from others of these types, is the plan. We believe that much easy material giving the child a wealth of experience and developing in a habit of free and spontaneous expression is far superior to the labored study of detail in reading so common in schools. Too many schools are starving the children's minds in literature.

Literature. To be told or read by teacher and reproduced by children.

Stories.

Myths—Greek, Norse, and Roman.

The Golden Touch 2-I, 15

Clytie 1, 2-I, 5

Arachne 2-I, 5, 6, 12

Pandora 2-I, 47

Prometheus 2-I, 5, 6

Persephone 1, 2-I, 5

Baucis and Philemon 2-I, 5

Thor and His Hammer 7, 10, 11, 15, 18, 20

Thor's Journey to Jotenheim 7, 10, 11, 18, 20

Fairy Tale, Folklore and Fable.

Cinderella 24, 26, 27, 30, 31, 32, 33, 45

Jack the Giant Killer 26, 34

Queen Bee 35

Aladdin's Lamp 26, 32, 44, 47

The Four Winds—Any edition of Longfellow

The Brave Tin Soldier 28

Beauty and the Beast 24, 26, 31

The King of the Golden River, adapted 25

The Pied Piper of Hamelin 35

Adventures of a Brownie 43

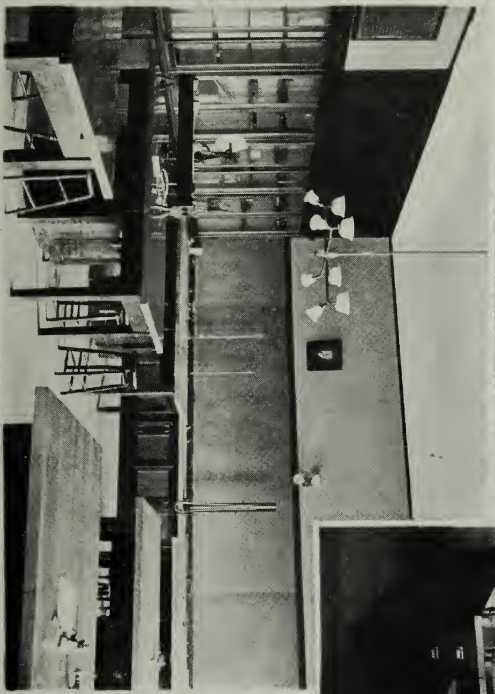
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¹Numbers refer to sources, a list of which is found in the appendix.



THE GEOGRAPHICAL LABORATORY

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SCOTT McCAUSLAND

SECOND GRADE

- Goldenrod and Aster 5
 The Anxious Leaf 12-II, 30
 The Nose 32
 The Lion and the Mouse 24, 27, 30

Hero Stories.

- Grace Darling 54
 William Tell 40, 54
 Horatius at the Bridge 54
 Story of Columbus 13-II, 39, 48

Other Stories.

- The Bell of Atri 54
 The Little Match Girl 14, 30, 35
 Old Pipes and the Dryad 52
 Robinson Crusoe 46
 Raggylug 50, 51
 Beautiful Joe 53
 Picciola 45, 54
 Mufflou 49
 Pippa's Song 23

Poems.

- September—H. H. Jackson 1, 5
 Tell Me Sunny Goldenrod 5
 October—H. H. Jackson 1, 5
 Sweet and Low—Tennyson 2, 3, 5
 The Tree—Bjornson 1, 3, 5
 Hiawatha's Childhood—Longfellow 1, 2
 Bed in Summer—Stevenson 7, 10
 Jack Frost, Thaxter 3
 Clouds—Sherman 4
 Thanksgiving Day—Childs 4, 5
 The First Christmas—Poulsso 3
 Verses from St. Luke, II, 8-14 Bible
 Snowflakes—Mary Mapes Dodge 1, 4
 I Love You, Mother 1
 Lady Moon—Lord Houghton 3
 The Little Elf—J. K. Bangs. Private Collection
 Talking in Their Sleep—E. M. Thomas 1
 The Flag Goes By 1, 2
 The Children's Hour—Longfellow 1, 12
 Wynken, Blynken and Nod—Field 1, 2, 5, 6

SECOND GRADE

- Little Things 3
 March 4
 Nearly Ready—M. M. Dodge 4
 March—Lucy Larcom 3
 The Laughing Chorus, One Stanza 5
 The Wind—Stevenson 1
 The Child's World—Browne 1
 What Robin Told—Cooper 1
 The Secret 1
 April 3
 The Daisies—F. D. Sherman 3
 How the Winds Blow, Spring 5
 The Dandelion 3
 Spring—Thaxter 4
 Seven Times One—Ingelow 3, 5
 Song of the Bee 5
 A Bird's Nest 5
 Ariel's Song 3
 The Swing—Stevenson 1
 A Day—Emily Dickinson 4
 Song—Thaxter 13

Songs. See Music.

Reading. The work in reading, as such, will be drawn largely from the list of books following. Not all of any one text will necessarily be used. Selection among texts has been made largely on the basis of the content values. Invented material will be avoided in a large measure. Books listed for the first grade will be used in part, especially for drill in developing freedom and rapid reading perception.

Second Year Language Reader—Baker-Carpenter—Macmillan Co.

The Jones Second Reader—Ginn & Co.

Child Life Second Reader—Blaisdell—Macmillan Co.

Second Reader by Taylor—American Book Co.

The Silver Second Reader—Powers and Balliet—Silver, Burdett & Co.

Hiawatha Primer—Holbrook—Houghton, Mifflin & Co.

The Art Reader, Book II—F. E. Chutter—Atkinson, Mentzer & Co.

SECOND GRADE

The Tree Dwellers, Early Cave Men, and Later Cave Men—
Katherine E. Dopp—Rand, McNally & Co.

Reynard the Fox—E. Louise Smith—American Book Co.

Spelling and Phonetics. Oral and written work in spelling as well as phonetics are made incidental to the reading and other work. Ample attention, however, is given to drill work in this field as occasion shows need for it. Spelling includes study of synonyms and homonyms, and in phonetics, all vowel sounds except those considered obscure, and such consonant sounds and blends as the child meets with difficulty. Some practice in syllabication is provided.

Language. In addition to attention to work begun in the first grade, this year's work should include the writing of quotations; the use of capitals in the names of days and months and in verse; the simpler abbreviations; and the comma with words of address. Children must be guided and helped in the correct use of idioms and oral composition. Dramatization in connection with work in history, reading and story telling will aid in developing freedom and power in expression. Composition work is largely oral in this grade. Encourage the child to feel that whatever he says should be said well.

HISTORY

In this grade the child should become familiar with some of the conditions of primitive life and thus realize what it meant to live without many of the ordinary necessities of everyday life as we now know it. The stages of human development followed the line of progress in the industrial arts, hence that is the natural line of development for the teacher to follow. As the pupil follows the progress of the race in its first steps in the arts, he will see growth and development, and it is believed that he will appreciate all the more what modern social conditions mean to him. Comparisons are constant, the work of the first year having furnished an especially helpful basis for this work.

The best basis for the work of this grade at the present time is the series of books written by Miss Katherine Elizabeth Dopp, published by Rand, McNally & Company, Chicago. So far three numbers of this series, The Tree Dwellers, Early Cave Men, and Later Cave Men, are available. Like all books, they should be adapted to the class and to the conditions of environment. Emphasize only those elements which make for progress, which are

SECOND GRADE

steps forward in human development. By the method employed, children are led to experience the conditions portrayed, in so far as possible, thus making them vital and usable. The work of this grade brings the study down to the beginnings of the pastoral stage of human industrial development. The work involves much study of local geography.

The teacher will find the following books very helpful in developing this work. The first work mentioned is especially valuable.

The Place of the Industries in Elementary Education, by Katherine E. Dopp—University of Chicago Press, Chicago.
First Steps in Human Progress, Frederick Starr—Jennings & Pye, Cincinnati.

The Early History of Mankind, E. B. Taylor—Henry Holt & Co. Chicago.

Woman's Share in Primitive Culture, O. T. Mason—Appletons, New York.

The Story of Ab, Stanley Waterloo—Doubleday, Page & Co., New York.

History for Graded and District Schools, E. W. Kemp—Ginn & Co.

Primitive Man, Morris Hoernes—Macmillans, Chicago.

GEOGRAPHY AND NATURE STUDY

Field trips as in the first grade will be continued, each trip to be planned with some definite purpose in view. Points to be especially noted will include: the nesting and feeding habits of birds; food of winter birds in cold weather; life histories and names of a number of the more attractive wild flowers, ferns and mosses; recognition of the more common wild flowers and trees; studies of the wild berries, fruits, stems, bark and roots which might be used as food, in connection with the primitive life or history work.

In gardening, study of soils will be continued; more attention will be given to conditions of growth in plants; studies of plant histories, noting the formation and development of fruit will be made; garden pests—weeds, worms, insects, etc., will be noted and means for eliminating these considered; in harvesting crops, note will be made of the parts of plants used for food—root, stem, leaves or fruit.

SECOND GRADE

Studies of animal life will be extended, using the common forms of the vicinity, rabbit, squirrel, chipmunk, etc., trying to tame some by providing food for them during the winter and by caging some caught in traps for this purpose. Care will be taken of any deserted young that may be found. The toad will be studied in its relation to our gardens. In the spring, the changes from tadpoles into toads and frogs will be studied. Honey bees and humble bees will be noted as they gather honey from the flowers and some work will be done in relation to our observation hive of bees. Life stories of some of the butterflies and moths whose cocoons or chrysalides are so often brought in by the children will be watched in their metamorphoses.

Weather studies will continue, including directions of winds, state of sky, conditions concurrent with storms, temperature, etc. Learning to read thermometer. Evaporation and condensation will be noted, especially in relation to cooking—boiling of water, etc. In the same relationship solvency, using salt, sugar, etc., will be taught.

In the above studies and in connection with history work, much attention will be given to physiographic conditions, hills, valleys, creeks, grassy plains, forests, etc.

Correlating with this work, will be found a number of stories and poems in the outline for literature which will help to stimulate interest in and sympathy with plant and animal life.

MATHEMATICS

Very little formal work in number is needed or appreciated by children in this grade. As in the first grade, all quantitative relations are regarded as the legitimate motives for number work and nothing beyond the needs thus arising is attempted. Hand work involves much measurement but all with small numbers; gardening, history work, cooking, all studies in buying and selling, involve number work but it is all with small numbers and the simplest processes. Simple fractions occur in cutting and folding and in division of materials, hence the simpler fractions, both as amounts and operators, are taught as occasion calls for them. Two-thirds, three-fourths, one-fifth and one-sixth are probably all the new fractions which will be needed and perhaps some of these will not appear. Relations between the inch and foot, two inches and the foot and between the pint and gallon will be de-

SECOND GRADE

veloped. Games will be encouraged which will involve number work in score keeping. To make permanent those number facts which are used and understood, adequate drill will be provided.

MANUAL ARTS

In the work of this year, history furnishes many of the motives for hand work. Other subjects and the seasonal and festival occasions contribute their part. The sequence in the several processes is provided by care in selecting problems involving activities of increasing complexity. Motive in a need for expression is an element never to be neglected.

Weaving. Braiding and Sewing: Hammocks, hand bag, pen-wiper, ironholder, school bag, needle-book, and various illustrative projects for history work, as, cradle, door of woven sticks, pattern weaving in baskets, etc. Materials used are: Raffia, grass, straw, husks, burlap, canvas, and for illustrative purposes, twigs, willow splints and bark.

Measuring, Folding, Cutting, Fastening, and Winding:

Serviceable projects: Portfolio, envelope, tray, seed boxes and bags, book, calendar back, loom, wall pocket, bracket, wall case, easel, bird house, marker, pencil sharpener, pen-wiper, pin cushion, twine box, match striker, rake for garden, ring toss, etc. Use raffia, paper, cardboard and wood.

Illustrative projects: Model of village, house, Indian village, wigwams, primitive weapons, implements, skin buckles, sandals, water bag of a gourd, pads for protecting heads, primitive snow shoes, traps, and trophies of various kinds, canoe, tent, bridge. frame for weaving, etc. The materials used are cardboard, paper, wood, leather, leaves, bones, stones, shells, seeds for necklaces, etc.

Drawing: Motives from stories, history, nature, garden work, etc. Drawing showing life and action; animal forms; landscapes; poses. Designs for other hand work. Drawing used as a means of expression, a way of telling something. The media used are pencil, crayon, ink, water color, and paper for composition cutting.

Modeling: Sand table and clay work. Plant and animal forms as suggested by seasons and history work; relief work, both horizontal and vertical, illustrating topics in nature, geography and history.

SECOND GRADE

Picture Study and Study of other Masterpieces of Hand Work: Many pieces of work in all phases of manual arts produced by the children will be compared with pieces representative of the best work we can see, either among our own school possessions or by visits to homes and shops in the town. These comparisons will both help the child in his own work and cultivate in him an appreciation of good work and artistic effect. During the year, special attention will be given to a number of pictures and occasionally to their authors as these afford material of interest for children. Among others, the following are suggested: *First Steps*, Millet; *Cat and Kittens at Play*, Adam; *By the Riverside*, Le Rolle; *Little Rose*, Whistler; *The Good Shepherd*, Plockhorst; Animal pictures by *Bonheur*, *Landseer*, and others and some nature and Indian pictures of the best types.

Cooking: Much work in this subject grows out of the history work. Baking or roasting of apples, potatoes, and corn in open fire out of doors compared with methods by use of the stove; primitive methods of boiling water and cooking food by putting hot stones in the water; broiling and roasting meats over an open fire. Making candy and preparing other kinds of sweet meats. Setting table. Preparing vegetables to be eaten raw for the table, as, radishes, lettuce, etc. Use of raw fruits as desserts, use of sugar, salt, etc., to make raw fruits and vegetables more palatable and wholesome.

MUSIC

The work in music is a continuation of the previous years and does not differ materially from it save that due regard is made of development and the work intensified as progression demands.

Rote Songs. For foundation work as in the first grade, but more complicated in both rhythm and melody as ability develops.

Syllable Songs. Used to teach new tone combinations and rhythms.

Rhythm. To be developed by drills in marking time, beating time, and by testing for feelings of rhythm.

Tone Testing. Recognizing by syllable, on scale ladder or staff intervals, phrases and melodies.

Original Melody work as in the first grade.

Scale Drills.

THIRD GRADE

Notation. To be introduced through the written representation of the syllable song. Copying and writing phrases from memory as exercises in teaching notation.

Sight Reading. Simple melodies using the notation already represented through the writing of the syllable song.

Program Music. Concerts to be given using songs taught throughout the year, and illustrative programs using voice and piano or other instruments to show characteristic music of all composers.

History of Music. In part through program music. Stories of some of the primitive musical instruments, showing their construction and development. Some correlations with the history of primitive man. Stories of the growth of notation and to illustrate the terms, andante, allegro, presto, forte and fortissimo.

Songs. See list under first grade, and sources for other selections in the Appendix.

PHYSICAL TRAINING

Work outlined for the first grade is designed to apply to this grade also. The work may be increased in complexity at will to meet the needs of growing and developing children.

Hygiene: Review as needed the points indicated under the first grade work. Talks and demonstrations on the care of the teeth, nails, hair and skin. Bathing-forms, needs, and benefits.

GRADE III.

ENGLISH

The same general statements found under the work outlined for grade II apply to the work of this grade.

Literature. To be told or read by the teacher and reproduced by the children.

Stories.

Fairy Tales.

A Rose Leaf, Bay 56

The Boy Who Went to the North Wind, Bay 56

The Emperor's New Clothes, Anderson 28

Myths and Legends.

Norse Myths.

The Story of the Beginning 7, 10

Odin's Reward 7, 10

THIRD GRADE

- Tyr and Wolf 7, 10
 Freyja's Necklace 7
 The Hammer of Thor 7, 10
 Thor's Wonderful Journey 7, 10
 How Thor Lost His Hammer 7
 A Gift from Frigga 7
 The Stealing of Iduna 7, 10
 Skadi 7
 The Death of Baldur 7, 10
 Aegir's Feast 7
 The Punishment of Loki 7, 10
 The Twilight of the Gods 7, 10
 German Legends—The Nibelungen.
 The Rhine-Gold 16, 19
 The Story of Brunhilde 16, 19
 Siegfried 16, 19
 English Legends—King Arthur, Robin Hood.
 The Winning of Knighthood 63
 The Winning of a Sword 63
 The Winning of a Queen 63
 The Story of Merlin 63
 Some Merry Adventures of Robin Hood 61
 Stories Correlated with History.
 The Great Law Giver, Baldwin 57
 The Shepherd Boy Who Became King 57
 The White-Headed Zal of Persia 58
 Humorous Stories.
 Johnny Bear, Seton 59
 Three Men of Gotham, Baldwin 54
 Other Wise Men of Gotham, Baldwin 54
 The Endless Tale, Baldwin 54
 The Blind Man and the Elephant, Baldwin 54
 Tweedle Dum and Tweedle Dee, Carrol 62, 65
 Alice and the Turtle, Carroll 62
 Alice and the Lizard 62
 Miscellaneous Stories.
 Black Beauty, Selections, Sewell 60
 Little Lame Prince, Craik 64
 Krag, Seton 56
 The Bell of Atri, Baldwin 54

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- The Pine Tree Shilling 24
 Ali Babi 26, 32
 The King of the Golden River, Ruskin 66
 Old Pipes and the Dryad, Stockton 52

Poems.

Of Nature.

- The Four Winds, Longfellow 3
 The First Snowfall, Lowell 13, 55, Prose
 The Fountain, Lowell 3, 13
 Buttercups and Daisies, Howitt 2, 26
 Autumn Leaves, Cooper 5
 The Daisy, Montgomery 5
 How the Leaves Come Down, Coolidge 1
 The Frost, Gould 1
 Calling the Violets, Larcom 1
 Written in March, Wordsworth 32, Prose
 A Boy's Song, Hogg 3
 To Violets, Herrick 3
 October's Bright Blue Weather 3, 5
 Winter Rain, Rosetti 3
 March, Bryant 3
 Wild Geese, Thaxter 3
 The Cloud, Shelly 3
 No—November, Hood 3
 Pebbles, Sherman 3
 The Rainbow, A Riddle, Schiller 3
 A Sea Song, Cunningham 3
 Ballad of the Tempest, Jas. Field 3

Miscellaneous.

- The Village Blacksmith, Longfellow 2
 Hiawatha's Sailing, Longfellow 3
 The Arrow and the Song, Longfellow 2, 3
 A Norse Lullaby, Field 3, 5
 Hilda's Christmas, Lane 3
 Today, Carlyle 3, 12
 The Three Bells of Glasgow, Whittier 2
 The Little Land, Stevenson 10
 The Challenge of Thor, Longfellow 3
 While Shepherds Watch Their Flocks by Night, Tate 3
 The Twenty-third Psalm 3, 5, 37

THIRD GRADE

The Spider and the Fly, Howitt 12

Thanksgiving Day, Child 5

Songs. Songs studied as literature. Phrases set to music.

Reading. Much reading is believed to be a wise means of developing capacity and to create a love and taste for good literature. Careful selection has been observed in securing material not too difficult and at the same time interesting and of standard excellence. In this year, children will be encouraged to read stories supplementing other work and to develop the library habit. The emphasis will be upon getting them to see that reading is getting thought from a book, and that if it is oral reading it is also telling another what the thought is. Expression is to be made prominent throughout. The books from which readings for class work will be largely drawn, are as follows:

Third Year Language Reader, Baker-Carpenter—Macmillan, Chicago.

Jones Third Reader—Ginn & Co., Chicago.

Child Life Third Reader, Blaisdell—MacMillan, Chicago.

Stepping Stones to Literature, III.—Silver, Burdett & Co., Chicago.

The Story of a Donkey, Segur—D. C. Heath & Co., Chicago.

For Sight reading, some of the texts and stories listed for the second grade will be used. Sight reading will also be provided by occasional supplementary work in other subjects.

Phonetics and Word Study. Continue drills on phonograms and blends as shown by needs in reading and spelling. Word studies, both oral and written, the words to be selected from other lessons and common needs. Drill upon such words as require. Much attention to spelling in all work.

Writing. Endeavor will be made to develop in each child ability to write legibly and with a fair degree of rapidity. Neatness will be emphasized, A natural slant, about fifteen degrees, will be encouraged.

Language. Reproduction stories. Poems and songs memorized. Dramatization in stories, history and reading as occasion requires. Selections from Asgard Stories, Wagner Opera Stories, Old Pipes and the Dryad, and from history stories, offer desirable material for dramatization. Letter writing and occasional written composition work in other subjects. Work on arbitrary

THIRD GRADE

forms continued as in second grade. Use of apostrophe in contractions and in possessives. Comma after yes and no, and after names of persons addressed. Quotations with quotation marks.

HISTORY

The work begun in the second grade continues through the greater portion of the third year; but the work now centers about different types. The industrial stages to be studied are the later hunting and fishing stages, the pastoral and the earlier agricultural and commercial periods. In following out the study of the types selected for this grade, the work gradually merges into the study of "authentic" history before the close of the year. As in the preceding grade, however, the organizing principle of the work is industrial progress.

The Later Hunting and Fishing Stages.

Types. For the American child the best examples of these stages of life are to be found on our own continent. Perhaps no better types could be found anywhere. We have the Indian of the plains, the Cliff Dwellers of the Southwestern part of United States and the Eskimos of Alaska. These three types are excellent illustrations of man's adaptation of home and habits in response to environment.

Points especially to be noted.

Kinds of game sought by each type.

Hunting weapons and means of catching game, as: the fully developed bow and arrow, the spear, traps, hooks, nets, use of stratagems, etc.

Means of pursuing game in or upon water—the canoe, the boat; the kinds of material used for construction of water crafts.

Means of preserving game and fish—salting, smoking, sun-drying, freezing, etc.

Extensive use of skins and the methods of dressing them.

Improved cooking utensils, pottery, etc.

Development of primitive agriculture—corn, pumpkins, tobacco, the potato, etc.

The dog as the type of early domestic animals; appearance of the horse and the use made of him by the Indian; peculiar importance of the buffalo herds of the plains.

THIRD GRADE

Ornaments, trophies, and rude money—use of shells, wampum, gold and silver ornaments, copper, etc.

Development of trade between different tribes and divisions of the same tribe.

Appearance of regular paths across the country, the first form of roads.

Spinning and weaving in their early forms.

The Pastoral, Early Agricultural, and Commercial Stages.

The transition from a hunting life to a pastoral one is worked out inductively, the class considering what industrial changes would follow if cattle or buffaloes were tamed and made the basis of food supply and clothing, wholly or in part. The type is to be found now in Asia, represented well by the clan of which Abraham is the chief or patriarch. The thread of Hebrew history is taken up and followed as indicated below:

Points especially to be noted in the Pastoral stage in Abraham's time are:

The domestication of cattle, sheep, goats, asses, camels and fowls.

Products secured from herds, as, wool, hides, flesh, milk and cheese.

Need of pasture and consequent wanderings of Abraham. Kind of life led by Abraham while hunting pasture for his herds; temporary home recurred to at different seasons of the year.

Necessity of protection from thieves; use of captives as herdsmen; use of armor; use of the sword and other bronze weapons.

Improvements in agriculture—use of wheat, barley, wine, olives; means of harvesting, threshing, cleaning and grinding wheat and barley.

Changes in clothing and in cooking utensils; better pottery, skins as vessels for carrying liquids; greater use of woven goods.

Development of trade which comes as a natural result of property in the form of herds and in the growing division of labor.

Abraham's religion; his belief in one God; the sacrifice in early religious worship; marriage customs of the

THIRD GRADE

Hebrews as seen in Isaac's marriage. Emphasize social conditions of the time.

Early Hebrew History Subsequent to Abraham.

Stories of Isaac and Jacob, their lives and religion, their care in preserving their racial purity; the patriarchal family.

Joseph.

How he came to Egypt.

The Famine and the entrance of the Hebrews into Egypt.

Main points of Egyptian industrial life as things which the Hebrews learned.

Conditions of life for the Hebrews while in Egypt.

Moses.

The hard life of the Hebrews.

Birth and early life of Moses.

Story of the burning bush; Moses' belief that he had been talking with God.

Aaron.

The Egyptian plagues and the belief of the Hebrews that their God had sent them as a punishment.

The escape from Egypt.

Wanderings in the wilderness and death of Moses.

Social conditions.

Joshua as the war leader.

Gideon, Samson, and other hero stories typical of conditions in the period of the Judges.

Saul and the change from mere tribal government to a form of national government. Theocratic character of the government.

The Story of David. David and Saul; David and Jonathan.

Solomon and the building of the Temple. In this connection, draw in Phœnicia with its arts and commerce.

Materials and workmen used in building the Temple.

Rehoboam and how he caused a division of the Kingdom.

Sargon and the carrying away of the Ten Tribes. Touch briefly on the growth of Babylonian.

Nebuchadnezzar and the Babylonian captivity. Jeremiah.

Daniel and Cyrus and the return of the Hebrews to Jerusalem.

Darius and the expansion of Persia till it came in contact

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with Greece.

Throughout this year's work, emphasis will be placed upon the changing industrial conditions and the changed social relationships consequent to these. Interrelationships and interdependence are seen to be growing ever larger and wider as division of labor, trade and commerce develop.

Books helpful in the development of the Hunting and Fishing Stages are as follows:

All of those listed under the second grade history.

The American Race, D. G. Brinton—McKay.

The story of Primitive Man, Clodd—Appleton & Co., Chicago.

First Steps in Human Progress, Starr—Chautauqua Pub. Co.

Lolami, the Cliff Dweller, Clara Kern Bayliss—Pub. School Pub. Co.

The Indians of Today, Grinnell—Stone.

For the period covered in the Hebrew studies, the following are good, the first list, A, made up of books children may read or have read to them, the second, B, made up of those helpful to the teacher:

A. Old Testament Bible Stories, W. A. Sheldon—Welch Co., Chicago.

Old Stories of the East, Baldwin—American Book Co., Chicago.

Wandering Heroes, Price—Silver, Burdett & Co., Chicago.

History for Graded and District Schools, Kemp—Ginn & Co., Chicago.

B. The Bible.

History of the Hebrews, Kent—Scribners, New York.

The Life and Times of Joseph. H. G. Tomkins—Relig. Tract Soc., London.

The Jews, Hosmer—Putnams, New York.

Historians History of the World, H. S. Williams—Outlook Co., New York.

The Dawn of Civilization, Maspero—Appleton & Co., New York.

Life in Ancient Egypt and Assyria, Maspero—Appleton, New York.

THIRD GRADE

GEOGRAPHY AND NATURE STUDY

The work of this year is an enlargement on that of preceding years. It is a study of the immediate environment, Macomb and vicinity. Everything studied should relate, in some way, to home life and therefore appeal strongly to children's interests. Home life thus studied serves as a basis for comparison and contrast for the lives of distant peoples.

How People Live.

Houses. Locations. Building materials—lumber, bricks, concrete blocks. Good roofing needed to keep out heavy rains; good siding to protect from cold winds; windows needed in summer for air and at all times for light; methods of heating. House in process of construction visited and materials and methods of preparing and placing noted. Comparisons with houses learned about in history and literature.

Dress. Correlated closely with history and manual arts. Garments worn in winter and why; in summer and why. Sources of clothing material; several from animals; from plants. Sources and uses of wool, linen, cotton, silk, leather, and rubber as clothing materials. The tailor shop, clothing house, and shoe store and shop.

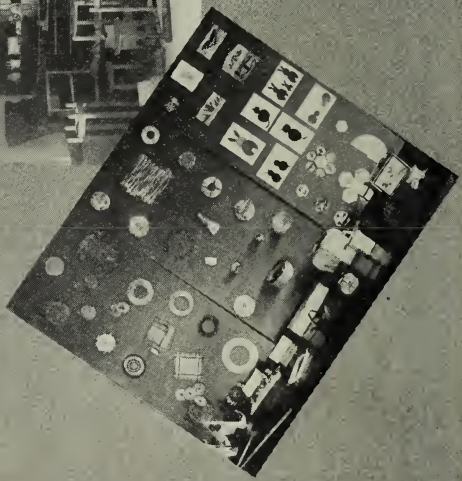
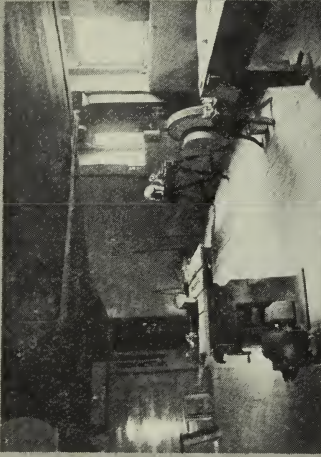
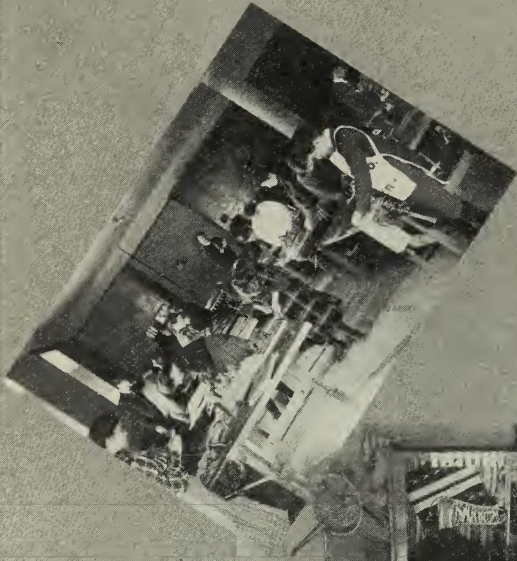
Foods. Plants and animals as sources of food supply. Foods used more in winter; in summer; reasons as far as children can appreciate them. Articles of food made in the home. Visit a grocery store; meat market; fruit store; bakery; name articles of food procured from each of these. Which come prepared? Which need further preparation? Note the large number of people engaged in supplying other people with food. Note the cost of common articles, as, loaf of bread, pound of meat, a dozen bananas, a sack of flour, etc. Quantitative considerations furnish valuable arithmetic work here.

Water Supply.

Wells. Source of well water. Difficulty in obtaining. Quality. Why often impure.

Cisterns. Uses of rainwater. Why different. Building cisterns.

City Water. How obtained. How furnished to houses. Quality. Visit city pumping station.



DRAWING



DEPARTMENT

THE UNIVERSITY OF CHICAGO

THIRD GRADE

Fuel.

Wood. Where obtained. How sold. The supply. Should all trees be cut for fuel? Uses of trees for shade, for protection from cold winds, for beauty, for protection of birds and animals. Wood too valuable for fuel.

Coal. Where obtained. Visit a mine if possible. Compare value of coal and wood as fuels, as to heating properties, convenience, and cleanliness. How sold. Cost.

Gas. From what obtained, How obtained. How supplied to homes. Convenience. Compare with wood and with coal. Visit to gas plant.

Oil. Uses. How sold. Cost. Comparisons with other fuels.

Light.

Candles. How they are made. Convenience and usefulness. Their uses today. Stories of lighting in primitive and pioneer times.

Oil. Its source. Its general use in the country. The lamp; comparison with the candle in principle. Dangers in the use of oils.

Gas and gas light. Convenience, cost, dangers.

Electricity. Convenience, safety, cleanliness, brightness; compare with gas and oil. Visit plant. Method of conducting electricity.

What the people do.

Farm. Method of farming. Grounds best suited to farming. Are best farms hilly or level? Visit Crooked Creek; find places where the run-off has chiseled deep gulches and valleys. Could such ground be cultivated? Washing away of soils. Uses of such worn land. Now visit a level tract or farm. Compare. Note growing crops, farm work, seeding, cultivating, harvesting, etc.

Fruit growing. Excursion to orchard or fruit farm in early spring. Note bloom of plants and trees. Watch developing fruit. Visit the same places in the fall. Care of trees and fruits. What injures fruit? What injures plants or trees? Protecting plants and fruits. Spraying. Note surface and soils of orchards; level or sloping? Which is better. Why? How, when and where fruit is sold. Uses.

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Garden. Where do people garden? Why? Excursion to a garden. Note location and soil. Note varieties of products. Cultivation.

Stock Raising and Dairying. Before beginning, make additional visit to rough land to develop the fact that such lands can not be farmed but are useful for pastures. But note also that stock is raised upon level lands which are better. Study: Horses; cattle; sheep; hogs. Discuss work of production, value of products, uses, markets for each, etc. Compare the importance of these industries with farming, gardening and fruit growing.

Dairying. Churning in the home is known to some children. Study the making of butter and cheese. Note and visit some of the small dairies that supply milk to families. Uses of dairy products. Cost and methods of selling.

Poultry Raising. Uses and needs of poultry and how these needs are supplied. Methods of selling and values.

Bee Keeping. Uses of bees, methods of supply, conditions of profitably keeping bees, and cost of products.

Work in Factories.

The Pottery. Visit a pottery. Discuss essential principles of the work. Materials used. How obtained. Visit a clay mine. Note that pottery, like the crops, comes from the earth. Compare the processes with those of clay modeling in school. Recall the pottery of early peoples learned about in history. Visit and treat similarly the brick yard. Note the significance of each industry. Observe the loading of cars with stone ware. Brick and pottery in human history.

The Foundry. The pig iron. The Blast. Making moulds. Pouring. Polishing. Uses of products. Loading cars. Demand for old iron. Number of men employed. Amount of skill demanded. Compare with work of pottery, and of other vocations studied.

Other occupations. In a manner similar to the above treatments, study also, the following: Carpenter; lumberman; merchants; doctors, including the hospital; dentists; lawyers; and others as time and conditions indicate. In all of these studies, geographical controls are to stand out as the most important phase of study.

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Weather study, local topography, erosion, transportation and deposition of soils, through work as outlined above and by special work along Normal Creek, will receive much attention

Roads. Highways, streets, sidewalks, as public utilities. Methods of building. Uses and rights of travel. Support of roads, paving, etc. Methods of road and bridge making in the country. "Working" roads.

Care of the City. Government—Council, Mayor, Aldermen, etc. Fire Department. Lighting Systems. Public Health. Beautification of the City.

In connection with the above work and with manual arts and history, the following observational and experimental work will be carried out:

Bird studies will be continued as in the second grade, enlarging the range of study as capacity of children and conditions warrant.

Plant studies will include a number of the troublesome plants as dandelion, mallow, shepherd's purse, dock, pursley, pig weed, etc., in connection with the lawn and garden and farm. Methods of extermination will be considered. More attention will be given to the recognition and naming of wild flowers—hepatica, buttercup, Jack-in-the pulpit, cinquefoil, spiderwort, etc. In connection with gardening, studies will be made of germination of seeds; names of dry seeds; times of planting; character of soils, cultivation and retention of moisture; recognition of growing plants. Common trees.

Insect and animal life will be continued, especially in connection with gardening and other economic questions. The mosquito, cockroach, box elder bug, rats and mice, are among the injurious forms. Interesting forms suggested by the children, the bumblebee, butterflies, moths, frogs and toads, etc., will be noted.

Weather studies will include clouds, tints of the sky, conduct of storms, precipitation of moisture in various forms, dew, frost, evaporation of water, etc., in addition to the references above noted.

Food studies, in connection with cooking, will include: Noting the boiling point; solutions—hot and cold water as a

THIRD GRADE

solvent; the coagulation of albumen by heat, using meat; the effect of temperature upon egg; the iodine test for starch, using the potato; test for sugar, using milk and fruits; and the different kinds of pumpkins, noting the effects of heat upon them.

MATHEMATICS

The number work of this grade is confined largely to the consideration of imaged, or imagined, *things*. However, generalizations about numbers come to be common in this grade, but these are to be accepted only as they represent definitely the action of the child's own intelligence. Emphasize the ten group as a unit for interpreting larger groups. The scope of the work is roughly indicated as follows:

Counting to 100 with the ten unit as the means,—reading, writing and translating into ideas the number symbols and words. Use objects only in so far as is necessary to impress meanings. Images should now take the place of objects in much work.

Meanings of one-seventh, one-eighth, one-ninth, one-tenth, one-twelfth, three-fifths, four-fifths, two-sevenths, three-eighths, etc., as amounts and as operators. Use only in the commonest forms and in real situations and relationships to get meanings.

Addition, subtraction, multiplication, division and partition—real number work shorn of formality and technicality—in a field not beyond the power of the pupils to grasp with relative ease. Probably not much beyond one hundred for the larger number of problems. Some generalizations with smaller numbers. Much work involving the ten unit in terms of imaged things.

Relations as *amounts* and in terms of things, objects themselves, imaged objects and representations, as drawings for halves and fourths; halves and sixths; halves and eighths; thirds and sixths; fourths and eighths:

Problems involving the above will be furnished in abundance by the needs arising in hand work, cooking, in the trips taken to bakery, grocery, garden, farm, and other places, and in the games and plays used in the school room. For drill work, games will be used quite extensively. The games published by the

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Cincinnati Game Company, Cincinnati, Ohio, have been found excellent for this work.

MANUAL ARTS

History and geography, as may be seen from consulting these subjects, together with seasonal and occasional needs, furnish motives for the major portion of the hand work. Motive in a need for expression or in need for illustrative purposes to aid in clarifying conceptions or thoughts is a test applied to the determination of any project taken up.

Carding, Spinning, Dying, Weaving, Braiding, Sewing: Use raffia, reeds, cloth, straw, grasses and cords, for making mats, rugs, fish nets, tents, and such other projects as are needed to develop the other subjects and meet other needs.

Measuring, Folding, Cutting, Fastening: Materials used are cardboard, paper, bark and wood. Useful projects will include wall pockets, frames, calendar backs, insect case, lampshade, work basket, boxes, traps, weather vane, book rack, plant stand, valentines, cards, bow and arrow, spindle and loom, marker, and labels. Illustrative work in connection with history, geography and literature will include models of chairs, house furnishings, implements as used by early peoples, canoes, boats, moulds for candles, etc.

Measuring, Cutting, Sewing: Use of crash, cotton cloth, burlap, canvas and leather, for making bags, penwipers, aprons, towels, holders, ball covers, etc.

Drawing: Designing and decoration of projects above outlined. Illustrative drawing with motives from history, nature and geography work, stories and reading. Stories told by means of pictures. Much use of blackboard work. The same variety of media used as in the second grade.

Modeling: Work in clay and sand. Relief work illustrating history and literature, animal forms, stories, etc. Models of animals, cradle, corn crusher, igloo, dishes, early pottery, etc.

Picture Study and Study of Other Masterpieces of Hand Work: Studies of the best available products representative of the processes above outlined—mats, rugs, carpets, house furnishings, cardboard products, pottery, drawings and paintings. Study these for purposes of getting good copies,

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criticising the work of the children, developing principles, cultivating taste, and for the joy of appreciating their excellence and their meanings. Authors will be studied occasionally in connection with their work. Among the pictures whose authors will be studied, the following are suggestive types: At the Watering Trough, *Bouvert*; Road to the Village, *Reicke*; Oxen Plowing, *Troon*; The Horse Fair, *Bonheur*; The Sower, *Millet*; The Lake, *Corot*; Shepherdess Knitting, *Millet*; The Balloon, *Dupre*; The Gleaners, *Millet*; Moses, *Angelo*, and many of the Old Testament Bible Pictures, *Tissot*, to correlate with the history of the Hebrews.

Cooking; Making grape jelly for luncheons. Drying of pumpkin. Time required for cooking of pumpkin. Cooking of vegetables: starchy, the potato; sweet juiced, the carrot; strong juiced, cabbage and onions. White sauce, for vegetables. Broiling of meats. Soups, without stock—potato, pea, bean. Cooking eggs. Bread baking, milk and its products—making of butter, etc., in connection with geography work. Studies of food of Hebrews and other peoples found in history. Christmas candies.

Housekeeping: Care of utensils; general cleanliness; serving of luncheons, for children and parents. Setting of tables. Table decoration.

MUSIC

Rote Songs. Rote songs are continued to give the children a means of free expression and to train the power to imitate and produce.

Syllable Songs. To be used to teach new intervals and rhythms.

Rhythm Drills. Counting, beating and marking time; to be used with rote and syllable songs in connection with the sight reading.

Notation. In the representation of the syllable song. Copying and writing from memory. Quarter, half, whole and eighth notes and rests to be named and used in copying and writing. Relative values of notes and rests.

Time signatures named and defined. Signatures placed and do or 1 located in keys of C, G, D, A, E, F, B flat, E flat and A flat.

Tone Testing for ear training, and *scale drills* continued as in second grade, noting and meeting the needs of pupils.

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Original Melody Construction.

Two Voice Work. Use rounds and canons and simple two voice songs and exercises.

Sight Reading. Reading at sight exercises in any key in two-four, three-four, four-four, three-eight and six-eight time, and joining words and music at sight.

The text book used is the Modern Music Primer, Smith—Silver, Burdet & Co.

For supplementary material, the text most used in the New Educational Music Course, Book I—Ginn & Co., Chicago.

Program Music. Programs to be given by the children using material taught throughout the year. Concerts for the children at least once each month using characteristic music for the voice, and piano or other instruments.

History of Music. In part through program music. Stories of Bach and Palestrina with selections appreciable by the children. Stories of the development of harmony. Musical instruments of the Hebrews, Egyptians, and Persians, correlating with the history of this grade. The psalm and stories of early church music.

Songs. Selections as indicated above. Also songs in response to seasonal and occasional interests. Original melody work encouraged for these purposes also.

PHYSICAL TRAINING

In this grade and in the fourth also, we find conditions of growth somewhat different from those in the preceding grades. Physical development is slower: tendencies to nervous disorder are stronger; and mental dullness may seem to be more in evidence. The aim of the work, while including all that applies in the preceding grade, looks more toward stimulating the circulation; giving poise and self-control; and developing mental acuity through quick and correct responses to command and situations in plays and games.

General Exercises: Free exercises, stretching, relaxing, etc.

Marching by 2's and 4's; half-facings; spacings; marching calisthenics.

Pole and rope climbing.

Simple bell and club exercises using weights of one-half to three-fourth pounds.

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- Exercises with small wands for back and chest muscles.
 Rhythm Work: Steps, running, skipping, gliding, heel and toe, etc.
 Games: Throwing the Ball; Center Ball; Pass Ball; Simple Relay.
 Races; Bell and Club Relays; Touch Down; Circle Tag; etc.
 Hygiene: Dietetics. Kinds of food needed; when food should be taken; over-eating and drinking: eating slowly; need of rest immediately after eating; bathing in its reference to time of eating; etc.

GRADE IV

ENGLISH

Greater power of sustained attention and greater facility in reading now make possible the use of longer selections for reading and study. Classic literature in much variety is used. A study of the Greek and Roman periods in history suggests much excellent material for literature.

Literature.

Stories.

General Stories—As partial basis for composition and dramatization during the first part of the year.

Story of Ulysses, Cook 68

Casabianca 58

Antonio Canova 58

Story of Aladdin—The Wonderful Lamp 26

Second Voyage of Sinbad the Sailor 26

Mowgli's Brothers, Kipling 67

Kaa's Hunting, Kipling 67

Tiger! Tiger!, Kipling 67

Rikki-Tikki-Tavi, Kipling 67

The White Seal, Kipling 67

The Bee-Man of Orn, Stockton 52

The Christmas Truants, Stockton 52

Water Babies, Kingsley 69

Uncle Remus Stories, Harris 70

Stories Correlated with History.

The Story of Cincinnatus, Baldwin 54

The Story of Regulus 54.

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- Cornelia's Jewels 54.
 Androculus and the Lion 54
 Damon and Pythias 54
 A Laconic Answer 54
 The Ungrateful Guest 54
 Alexander and Bucephalus 54
 Diogenes the Wise Man 54
 The Brave Three Hundred 54
 Socrates and His House 54
 As Rich As Croesus, Baldwin 58
 The Gordian Knot 58
 Why Alexander Wept 58
 The Fall of Troy 58
 Penelope's Web 58
 How Rome Was Founded 58
 How Decius Mus Saved Rome 58
 "Delenda est Carthago" 58
 Hannibal, the Hero of Carthage 58

Poems.

Of Nature.

- The Brook, Tennyson 2, 3, 13, 32
 The Daffodil, First Stanza, Wordsworth 2
 The Nightingale and the Glow-Worm, Cowper
 Sparrows, Thaxter 15
 A Laughing Chorus, Selected 5
 The Peter Bird, H. T. Stanton 5
 Robert of Lincoln, Bryant 1, 2, 3, 5, 32
 The Planting of the Apple Tree, Bryant 3

Miscellaneous.

- The Bell of Atri, Longfellow 3
 Old Ironsides, Holmes 2, 3, 13
 The Wreck of the Hesperus, Longfellow 2, 13
 Horatius at the Bridge, Macaulay 2
 The Fairies, Allingham 14
 Nobility, Alice Cary 16
 Little Gottlieb, Phoeby Cary 16
 Nightfall in Dordrecht, Field 5
 Japanese Lullaby 5
 Casabianca, Hemans 2, 3, 13, 32
 The Star-Spangled Banner, Key 2

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- The Captain's Daughter, Jas. Fields 2, 13
 A Christmas Card, Lowell 3
 Driving Home the Cows, Osgood 2
 America, Smith 2
 A Visit from St. Nicholas, Moore 2
 Song of Life, Mackay 2

Songs. Songs used in the music work interpreted as literature.

Reading. Increasing attention will be given to exactness of interpretation and expression. In addition to the stories and poems indicated above, selections for reading will be made from the following texts:

Fourth Year Language Reader, Baker-Carpenter—Macmillan, Chicago.

Stepping Stones to Literature, IV.—Silver, Burdett & Co., Chicago.

Jones Fourth Reader—Ginn & Co., Chicago.

Graded Literature Reader, Book IV.—Maynard, Merrill & Co., Chicago.

Ten Boys from Long Ago to Now, for stories of Darius, Cleon, and Horatius, Andrews—Ginn & Co., Chicago.

Seven Little Sisters, Andrews—Ginn & Co.

Story of Lincoln, Cravens—Pub. School Pub. Co., Bloomington.

Story of Ulysses, Cook—Pub. School Pub. Co., Bloomington, Illinois.

Pinocchio, Collodi—Ginn & Co., Chicago.

Books used in the third grade, and possibly in the second, will be taken in this grade for sight reading to aid in the development of freedom and fluency in expression. Throughout the grades, children will be encouraged to read aloud to parents and others in the home. Teachers will often read aloud to pupils. Imitation is a very important factor in cultivating excellence in enunciation, pronunciation, quality of voice and all other elements of oral expression.

Word Study. In this grade, children will be given systematic instruction in the use of the dictionary in getting the pronunciation and the meanings of necessary words. Although systematic, this work will be in relation to other work which occasions the needs for the use of the dictionary. As to spelling, the same

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careful method of work indicated in the third grade outline will continue.

Writing. Continued as in the third grade. Emphasized in all work.

Language. Arbitrary forms already learned, contractions, abbreviations, use of comma in series, further uses of the period, etc., are dwelt upon and ample opportunity given for application of their use in composition work. For a part of the work, a text book is placed in the hands of the pupil. Language through Nature Literature and Art by Purdue and Griswold, Rand, McNally & Co., Chicago, provides a great deal of work very closely correlated with other subjects and furnishes typical methods of procedure. Its selections of stories, poems, and pictures are of excellent quality and well treated. Another text used at times, especially for teaching variety and beauty of expression, is the Woodley Foundation Lessons in English, Book I, by the Macmillan Co., Chicago.

Dramatization as a means of clarifying thought and cultivating freedom and accuracy in expression will receive much attention in this grade. Among the motives used from literature and history, will be such as Theseus, Ceres and Proserpina, and selections from the Story of Ulysses.

Original composition work, some in verse for occasions and as phrases for melody construction in the making of songs, will be encouraged. In all work, oral and written, care will be used to influence children to express themselves with clearness and correctness.

HISTORY

The work of the third grade brought the study of the Persians into contact with the Greeks. The work of this year is devoted to the Greeks and Romans as types of civilized society. While the myths and legends, and the narratives of authentic history here become a very important part of the work, the industrial and vocational life of these peoples is still vitally emphasized. Progress in arts, letters and political life are here important. Greater social complexity, greater personal responsibility and social interdependence are found here and are to be duly emphasized. Through the rise, decline and fall of these states in relationship to the causes in private and public life

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which produced them, the child becomes conscious of the fundamental importance of conduct in the welfare of any people.

The contributions of the two peoples to our own civilization must be borne in mind constantly by the teacher. Comparisons with peoples and types of life earlier studied and with present day conditions are constant. The essential difference in the genius of the two peoples, the Greek in the field of art, letters and philosophy, the Roman in the field of law, government and practical affairs, should be appreciated. It is expected that the pupil will learn to feel this difference rather than to formulate it in words. Much work in dramatization, hand work and art study grows out of the material. The construction of houses, equipment and costumes of these peoples will receive due emphasis and especial attention will be given to the art side of Greek life. Physical Training will also receive a stimulus from the Greek work and an "Olympiad" may easily be an outgrowth of the study if it is desired.

Greece.

Mythology: Zeus; Poseidon; Pluto; Hera; Apollo; Artemis; Hephaestus; Aphrodite; Hermes; Ares; Bacchus; Athena.

Legendary History, Mother Ceres; Heracles; Theseus; Perseus; Jason and the Golden Fleece; The Trojan War.

The Law Givers.

Lycurgus and His Laws: Rules for the education of the youth. The common tables. Ideas of trade and money.

The Spartan ideas of honor. The Spartan as a man.

Draco: Conditions at Athens. Need of written laws.

Reforms of Draco. Solon.

The Persian Wars.

Croesus and the Greek cities in Asia Minor.

Conquest of Lydia by Cyrus.

The policy of Cyrus and Darius.

The burning of Sardis.

The first Persian invasion: The envoys who asked for earth and water. Miltiades and the battle of Marathon.

Ostracism at Athens.

The Second Persian invasion: Xerxes and his preparations. The army and the way it came. Preparations of the Greeks. Leonidas and the battle of Thermopylae.

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Themistocles and the battle of Salamis. Defeat of the Persians at Plataea.

Athens at the Time of Pericles.

Life of the people: Their houses, dress, schools, slaves, temples, games, and theaters.

The colonial empire of Athens.

The use Pericles made of money raised from the colonies: The fine public buildings of the acropolis; the statuary; carvings, and paintings; encouragement given to oratory, history and the drama—Herodotus; the theaters; Eschylus, Sophocles and Euripides. To make these dramatists more than mere names, the teacher may select some one play, as *Antigone*, tell the story, read some short selection, and allow the children to act it if they wish.

Socrates: His life and the way he taught.

Richness and strength of Athens.

The Pelopponesian War: Allies of Sparta; Outbreak of the war. The pestilence at Athens and the death of Pericles. The first Spartan captives. Part Alcibiades played in the war. The Athenian assembly and the law courts. Aristophanes and his satires: The "Wasps" and the "Birds" may both be used. The teacher may tell the story, read parts, and allow the children to act it. They will see the point in each play.

Thucydides as the historian of the war.

The Rise of Macedonia: Philip and Demosthenes. Alexander the Great.

Alexander's conquests; his character; his relation to Aristotle.

Rome.

Legendary History: Romulus and Remus and the founding of Rome. How the Romans secured wives. Lars Porsena. Horatius. The Tarquins and their expulsion.

The Republic.

Coriolanus and the Volscians.

The Gauls and the ransom of Rome.

Cincinnatus: How he saved Rome and the office of dictator.

The Plebians and their demand of citizenship. In this

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connection tell the main facts of Rome's early government.

War with Pyrrhus: What the Romans learned from fighting with the Greeks: Effects of the elephants upon the Roman soldiers. Appius Claudius and the refusal of peace. Final success of the Romans.

Rome's method of holding the conquered country: The military roads. Use of these roads for trading purposes. The question of citizenship.

How Rome Conquered the World and the Results of This.

The War with Carthage: How the war started. Duillius and the first fleet. Government of the first province.

Hannibal. Scipio. New colonies as a result of the war.

Life of the Romans at the close of the wars with Carthage: Dress; Houses; Occupations; Military service.

Conquest of Greece: Roman legions defeat the phalanx.

Growth of Grecian customs. The Romans learn Greek art, literature, religion and philosophy. Increase in the number of slaves.

From among the following books, material may be selected well adapted to the work above outlined. Those under division A in each case are in such form as to be read to or by the children of this grade. Those under B are helpful to the teacher but often beyond the pupil.

References on Greece.

A. Ten Boys on the Way from Long Ago to Now, Andrews—Ginn & Co.

Heroes of Olden Time, Baldwin—Scribners, New York.

Tales from Greek Story and Song. H. J. Church—Macmillan, Chicago.

Story of the Persian War, H. J. Church—Bay View Pub. Co.

Stories from Greek Comedy, H. J. Church—Macmillan, Chicago

Stories from Greek Tragedy, H. J. Church—Dodd, Mead & Co.

Myths of Greece and Rome, Guerber—American Book Co., Chicago.

Stories of the Greeks, Guerber—American Book Co., Chicago.

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- Homeric Stories, Hall—American Book Co., Chicago.
 Four Old Greeks, Hall—Rand, McNally & Co., Chicago.
 Greek Gods, Heroes and Men, Harding—Scott, Foresman & Co., Chicago.
 Tanglewood Tales, Hawthorne,—Houghton, Mifflin & Co., Chicago.
 Wonder Book, Hawthorne—Houghton, Mifflin & Co.,
 Greek Heroes, Kingsley—Macmillans, Chicago.
 Gods and Heroes, Francillon—Ginn & Co., Chicago.
 History for Graded and District Schools, Kemp—Ginn & Co., Chicago.
- B. Home Life of the Ancient Greek, Blumner—Cassell
 History of Greece, Bury—Macmillans, Chicago.
 Life of the Ancient Greeks, Gulick—Appleton & Co., Chicago.
 Old Greek Life, Mahaffy—American Book Co., Chicago.
 Ancient History, Myers—Ginn & Co., Chicago.
 Plutarch's Lives—Burt Publishing Co., New York.

References on Rome.

- A. All of those in the above list referring to Rome in part.
 Stories from Livy, H. J. Church—Dodd, Mead & Co., New York.
 Story of Romans, Guerber—American Book Co., Chicago.
 The City of the Seven Hills, Harding—Scott, Foresman & Co., Chicago.
 Stories of Old Rome, Pratt—Educational Pub. Co., Chicago.
- B. Life of the Greeks and Romans, Guhl and Kones—Appleton & Co.,
 Early Rome, Ihne—Scribners, New York.
 Private Life of the Romans, Johnson—Scott, Foreman & Co., Chicago.
 Private Life of the Romans, Preston and Dodge—Sanborn, New York.
 History of Rome, Momsen—Scribners, New York.
 Source Book of Roman History, Abridged, Munro—D. C. Heath & Co., Chicago.
 Ancient History, Myers—Ginn & Co., Chicago.

GEOGRAPHY AND NATURE STUDY.

The aim of the third year's work was to familiarize the child

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with the more pertinent and striking objects and activities in his own environment. But home life in counties commercially related is, only in part, conditioned by the activities of the home people. The aim this year is to become acquainted with the people of other lands, to learn of their countries and home life and to see how our products and work are of value to them and how their efforts and products contribute to our well being.

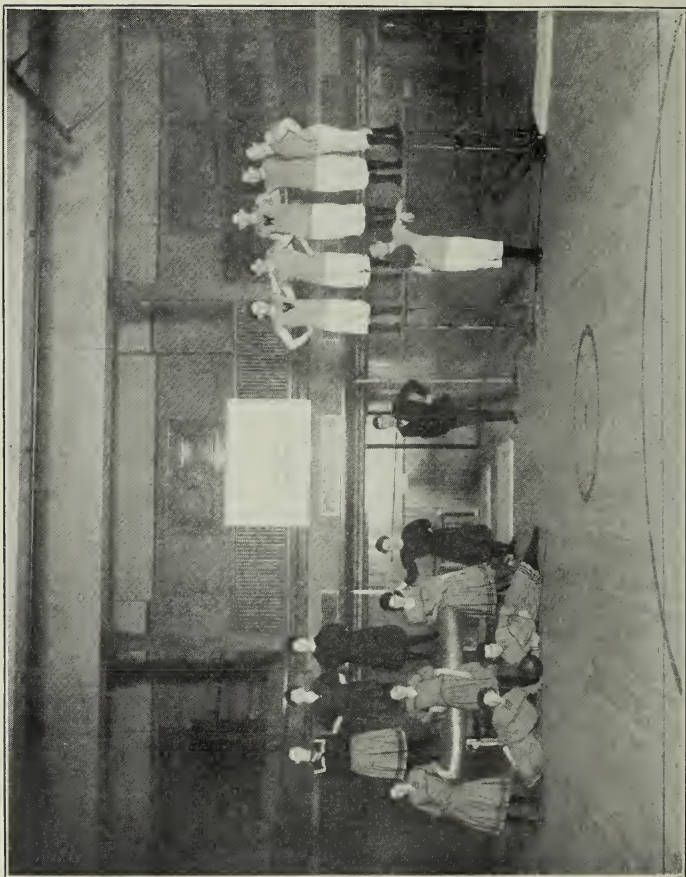
The many necessities and luxuries of our home life offer a natural approach to the study of many topics which will be widely enough distributed to lead us inductively to a view of the "World as a Whole". This procedure lays emphasis upon the commercial and industrial phases of geography and lays less stress upon physiography than do the customary text books. However, there may be considerable of the more significant other phases of geography taught, even at this early age. The child will come gradually to see that certain topography, climate and soils condition the life and determine the activities of their inhabitants. The full significance of "life controls" and "life responses" may not be comprehended at this time, but the idea will grow and in time become the central idea of school geography. Special effort should not be made to generalize but an attempt made to secure details which later will find their places in established categories, at which time the principles of geography will become clearer and more apparent.

Globes, maps and pictures, as well as the sand table, are freely used so that by the close of the year, the salient elements of location, extent, and more important land features will have been gained, largely incidentally. Local excursions will be made occasionally to furnish details for comparisons.

Below is given a list of suggested topics. Their treatment should be, as far as possible, such as to require thought and inference of the pupils. In many instances the topic is approached by tracing to the region of production some article of common use; then the life of the people, the character of the country, climate, etc., are studied in connection with a very general view of the industrial conditions which lead to the typical product with which we started.

Oysters in Chesapeake Bay.
Oranges in California.
Coffee and the Mexicans.

Holy Land and Bible History.
Fish; Norway.
Camphor and Straw Matting;



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India Rubber and the Amazon Valley.	Japan.
Sheep and Cattle in Argentina.	Seal and the Eskimo in Alaska.
Silk in Southern France.	Manila Hemp and the Philippines.
Sable and the Tundra Regions.	Dates and the Figs of Persia.
Cutlery in England.	Cod Fishing and the Grand Banks.
Pearls and Ceylon.	A Rice Field in Southern United States.
Olives, Macaroni, and the Italians.	Diamonds; Kimberly.
Ostrich Farm in California.	Egypt and the Exodus.
Flower Bulbs and Cheese; Holland.	Kangaroo and Australia.
Art, Architecture and the Rhine.	Trans-Atlantic Commerce.

The year should close with a summary of the "Earth as a Whole", and with elementary facts of its form, size, motions and relations to the sun.

In connection with the above work and with gardening and cooking, observational and experimental work will be carried on as follows:

Weather studies continued. Note the time and direction of the rising and setting sun, its altitude at noon, the state of the sky, the direction and velocity of winds, and the frequency of storms with the conditions of wind, temperature and barometer accompanying storms.

Bird studies will be reviewed and continued. Take account of knowledge and interests already possessed and use these as a basis. Do not neglect economic significance of birds and protection of them.

Plant studies will include a review of the trees, troublesome plants, wild flowers and garden products of previous years, and continued work in the same fields. More trees, as, the box elder, linden, birch, ash, cedar, catalpa, etc., will be noted in economic and ecological relationships. Some study will be made in discriminating between different species of the same genus, as, two maples, three oaks, two pines and two birches, may be learned. To the list of wild flowers may be added such as, lady's slipper, phlox, meadow lily, columbine, oxalis, larkspur, etc. Attention may also be given to domesticated flowers, as, geranium, begonia, fuscias, verbenas, petunias, nasturtiums, etc., emphasizing care, propriety in

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location in yard and garden, etc. Some of the flowerless plants, as, the ferns, mushrooms, mosses or fungi may be noted as these occur in excursions or otherwise. Garden work will continue with especial attention to propagation from seeds, by runners, using the strawberry, etc., and by cuttings, using roses, willows, etc. Plants met in geography, as, cotton, rice, flax, etc., will be planted and results used in enforcing necessary elements of climate, soils, etc., for their growth.

Insect and other animal life will be continued, giving increasing attention to insect pests. The peach and apple tree borers, the cut worm, coddling moth, and plum curculio will be noted as they appear in the neighborhood and methods of extermination tested. The habits of pets, of frogs and toads, of a common, local fish in aquarium and creek, and of the common small rodents, will be studied.

Food studies in connection with cooking will include: Distribution of sugar in plants—sugar cane, sorghum, sugar beets, maple and glucose, with some reference also to sugars in fruits. Chemical changes will be noted in making the idione test for starch in rice, macaroni, etc.; and in testing for sugar in milk. Physical experimentation and observation will include thickening of liquids with starch and gelatine; noting the different densities of liquids from study of milk and cream and oil in soups; the effect of temperature upon the curd of milk; the solubility of albumen in hot and cold water; evaporation and condensation.

Astronomical studies find a strong motive in this year's work in the studies of Greek history. Some of the more important and easily discovered constellations will be located and named.

For the work in geography in this grade, the following books are especially valuable:

Little Folks in Many Lands, Chance—Ginn & Co., Chicago.

The Wide World, Youth's Companion Series—Ginn & Co.

Geographical Readers, King—Lee, Shepard & Co., Boston.

Geographical Readers, Carpenter—American Book Co., Chicago.

Strange Lands Near Home, Youth's Companion Series—Ginn & Co.

When I Was a Boy in China, Yan Phon Lee—Lothrop Pub. Co., Boston.

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Chinese Life in Town and Country, Bord—Putnam's, New York.

Japanese Life in Town and Country, Knox—Putnam's, New York.

Hans the Eskimo, Scandlin—Silver, Burdett & Co., Chicago.

The Philippines, MacClintock—American Book Co.

Stories of Australia, Pratt—Educational Pub. Co., Chicago.

Big People and Little People of Other Lands, Shaw—Amer. Bk. Co.

Under Sunny Skies, Youth's Companion Series—Ginn & Co.

The Little Journey Series, George—A. Flanagan, Chicago.

Boy Travelers in Australia, Knox—Harpers, New York.

The Story of South Africa, G. M. Theal—Putnam's, New York.

My Kalulu—Central Africa, Stanley—Scribners, New York.

The Romance of a Mummy, T. Gautier—Lippincott Pub. Co.

The Story of Japan, R. van Bergen—American Book Co.

Child Life in Chinese Homes, Mrs. Bryson—American Book Co.

The Stories of Other Lands, Johonnot—American Book Co.

The Story of Mexico, S. Hale—Putnam's, New York.

Around and About South America, F. Vincent—D. Appleton & Co., Chicago.

MATHEMATICS

In the fourth grade, a wide generalization of the number idea is possible and desirable. The year's effort is concentrated on establishing intelligently and remembering thoroughly all number facts in the field to 100. New number facts are built upon related known facts as bases. Intensive drill work is very prominent. Concrete work is used as occasion calls for in other subjects and furnishes motive and meaning to the abstractions developed from it. The general scope of the work includes:

The mastery of all number facts, multiplication tables and forty-five combinations, in field to 100.

Counting to 10,000 with the hundred unit as the means.

This means reading, writing and using intelligently the number sounds and symbols in this field. Most work, however, is in field below 1,000.

General meaning and use of a fraction as an operator.

Addition and subtraction of fractions in a rather general way,

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the fractions, however, being confined to those in general use.

Simple cases of multiplication and partition and of division of fractions, interpreted in terms of the concrete and involving only easy conditions. Partition is to be translated from the multiplication side and in the multiplication symbolism.

As a drill on multiplication, division and partition facts, great emphasis is placed on factors and multiples, leading to ideas of highest common factor and least common multiple.

Decimal notation for tenths and hundredths with use of them as occasion indicates.

For drill work, the games of the Cincinnati Game Company and other games will be used frequently. Used after need for accuracy and facility have been shown, these games may be of high value. Constant use of fractional values will be made in the hand work of this year. Such pieces as the Roman house will indicate how extensive this usage may be. Questions of the economics of food, shelter and clothing, arising in geography, gardening and cooking will afford opportunity to use an abundance of live materials for problems involving all processes appropriate to the needs of the grade. Computing the cost of a luncheon suitable for an occasion at current prices is a problem of excellent content value.

MANUAL ARTS

Greek and Roman history, the work for this year, together with much journey geography, will furnish motives for much of the hand work of the year. An especial effort will be made to lead the children into a participating experience in the appreciation of the beautiful in the sculpture, painting, architecture and painting of the Greeks. The hand work will support the history, literature and dramatization in an effort to make the contributions of Greek culture count for most. All fields of manual art will overlap. In all pieces of shop work, the mechanical drawings for projects will precede work in the shop itself.

Weaving, Braiding, Sewing: Mats, rugs, baskets, costumes for dramatization, towels, aprons, holders, ball covers, pen wipers and bags will be made, using raffia, burlap crash, linen, cotton and leather.

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Measuring, Folding, Cutting, Fastening: Using cardboard, paper and wood, useful projects will include cards, paper knives, booklets, trays, boxes and pinholders. Illustrated projects will include models in connection with history, and geography study, as, Roman house, and furnishings, trireme, colonial house with furnishings, etc.

Drawing: design and decoration of the foregoing projects; motives from geography and nature study; studies in pose and action. Various media.

Modeling: Greek vase forms, tiles, human and animal forms and relief work, illustrating history and literature. Relief maps. Use clay, sand and flour and salt composition.

Picture Study and Study of Other Masterpieces of Hand Work: Same general treatment as in grade III. In this year, however, especial attention will be paid to Greek art and architecture. Prints of Greek masterpieces in sculpture and in architecture will be used extensively. Other pictures suggested are: A Reading from Homer, and others of this type, *Alma Tadema*; *Aurora*, *Guido Reni*; *The Three Fates*, *Angelo*; *Dance of the Nymphs*, *Corot*; *The Fog Warning*, *Homer*.

Cooking: Fish—creamed codfish; starchy foods—rice and maccaroni; further uses of milk—varieties of cheese; Soups—oyster and meat; gelatine in orange jelly; Sandwiches—fig, lettuce, nut, etc.; candies; studies of the foods of peoples studied in history; points of contact in gardening noted as they arise.

Housekeeping: Continued as in the third grade.

MUSIC

Rote Songs. Art songs not found in music readers to be taught for song interpretation and special exercises.

Syllable Songs. Used to introduce chromatics and new rhythms.

Rhythm Drills and *Scale Drills* continued.

Notation. Representation of chromatics, copying and writing from memory. Relative values of notes and rests. Definition of time signatures. Location of Key signatures and of *do*. Pitch names to be taught.

Tone Testing. Written work on the staff in various keys.

Original Melody and song construction.

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Two Voice Work. Continued as in third grade.

Dynamics. Explained and taught as they occur in songs and exercises.

Sight Reading. Exercises and songs found in Book I. of the Modern Music Series, Smith—Silver Burdett & Co., Chicago.

Program Music. Programs and Concerts to be given in connection with third grade.

History of Music. In part through programs. Musical instruments of the Greeks and Romans. Music of the Greek and Roman periods. The wandering poets and musicians. Music in the plays and in the lives of the Greeks. Close correlations with history and literature.

PHYSICAL TRAINING

Conditions of the children of this grade are so nearly the same as of those of the third grade that the same general plan of work will serve for both grades. When the grades are separated, work can be adapted to the older children as occasion demands. The interest in the Greek people may lead to a desire for an "Olympiad", which may be so conducted as to be of great value.

Hygiene: Personal appearance; posture; dress; movements.

Again the Greek ideal of physical perfection may be so used as to stimulate much attention to personal appearance.

GRADE V.

ENGLISH

Careful attention is given to expression in all phases of the work. Clearness of thought and expression in every individual piece of work is worth much more in developing excellence in English than formal studies of language in themselves. Much to read, much to express, and all well expressed are aims in all the grades.

Literature and Reading. Two types of reading will be followed in this and succeeding grades. The more usual plan of reading selections for class discussion and drill work will not occupy more than one half the reading time. Selections are chosen for this especially appropriate to the needs which children have for help in interpreting and expressing some of those forms of literature for which taste and appreciation have to be consciously cultivated because of formal difficulties.

The other plan is to ask each child to buy a book from a submitted list of books of acknowledged excellence, suited to his age and interests, instead of having all children buy the same book. Thus in a class of twenty, twenty different books are found. As books are finished, children exchange so that each has opportunity to read as many as twenty if time permits. The method of reading provides excellent opportunity for attention to needs of individual pupils. During the reading period, each child has his own book; a pupil is asked to go to the front and tell briefly the setting and situation of his story at the point where he wishes to read aloud. He then reads for a time while others listen or not as they choose. Through a period, several thus report. Occasional discussions arise. As needs appear, the teacher takes the pupil for individual instruction. Points of general need are referred to the whole class. In this work, the child has an interested listener, the teacher, and his difficulties receive more direct attention than in class work; pupils at their seats may also listen if they wish, and good reading receives due recognition; reading for the pleasure and profit of others as well as for one's self is thus cultivated as an aim. By the much more varied and extended reading possible by this method, more may be done in cultivating taste, good reading habits and ability in interpretation and expression than by the same time in the intensive, prolonged formal studies of the small thought content in the few selections often used.

The best selections from current magazines and children's papers will sometimes take the place of book studies. The teacher will do her share of oral reading to the class. Imitation in oral reading is not to be neglected. Definite time divisions in the year for each type of work will not be made. Alterations will occur as the teacher's judgment advises.

The Selections for more intensive class study suggested are:

Browning—Pied Piper.

Longfellow—Emperor's Bird Nest.

Morse—Visit from St. Nicholas.

Southey—Inchcape Rock.

Stevenson—Treasure Island—Abridged.

Thaxter—Sandpiper.

Selections from:

“Grandfather's Chair”—Hawthorne. “Heroes of Norse

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land"—Boult. "Odyssey"—Church's Translation. "Wonder Book"—Hawthorne.

List of books for individual reading:

- Alcott, Little Women; Little Men; Little, Brown and Co.
 Burnett, The Little Princess, Scribners.
 Baldwin, Story of Siegfried, Scribners.
 Carryl, Davy and the Goblin, Houghton.
 Dodge, Hans Brinker, Scribners.
 Ewing, Jackanapes, Little.
 Hale, L. P. Peterkin Papers, Houghton.
 Harris, Uncle Remus, His Songs and Sayings, Appleton.
 Little Mr. Thimblefinger, Houghton.
 Kipling, Jungle Book, Vol. I, Century.
 Lang Edition, Arabian Nights, Longmans; Red Fairy Book, Longmans.
 Muloch, Little Lame Prince, Burt.
 Peary, Snow Baby, Stokes.
 Page, Two Little Confederates, Scribners.
 Rabelais, translated by Dimitry, Three Good Giants, Houghton.
 Spyri, Heidi, DeWolf, Fiske and Co.
 Stockton, Fanciful Tales, Scribners.
 Wiggin, Bird's Christmas Carol, Houghton.

Language. The language work is related as closely as possible to the other studies and to the life experiences of the child. Some opportunities for effective writing are found in the following: Reports of excursions, experiments and gardening, keeping of a diary; writing of original stories; narration of events in history from the standpoint of a participant or an observer; writing of social and business letters; dramatization of events in literature and history; writing of poetry; interpretation of selections in literature; and interpretation of pictures.

All creative work is to be read aloud to other members of the class for their enjoyment and for comparison with their own work. Special emphasis is placed upon originality and effectiveness in expression.

Through all the written work careful attention is paid to form and to a review of technical points previously studied. The paragraph receives special attention.

Variety of expression is secured by drill in the use of

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antonyms, synonyms and comparison; by re-arrangement of words; by the addition of phrase and clause in the enlargement of the sentence, and by combination of short sentences.

In response to the development of the child, terms are given and definitions formulated.

The need for exactness of statement will lead to discrimination in the use of such words as may and can, lie and lay, teach and learn, love and like, pretty and handsome, lovely and beautiful, etc.

The use of the dictionary is an important part of the work of this grade.

Beautiful selections of poetry and prose are memorized.

Many helpful suggestions will be found in "Foundation Lessons in Language", Book I, by Woodley, Macmillan & Co., Chicago.

HISTORY

In this grade the historical material is drawn from the later Roman and the mediæval periods so as to connect the Ancient World with that of today. At the same time it must not be forgotten that it is in this period that another element is added to civilization, namely, the Germanic. On the life side the mediæval has much that is new and fascinating. It has also heroic men who are worth knowing.

Roman and Early Mediaeval History.

I. The Decay of the Republic and the Formation of the Empire.

1. The Gracchi.

a. Conditions of the poor in Rome. b. Efforts to remedy the conditions. c. The poor laws. d. Attempts to check the growth of slavery.

2. Marius, Sulla and Pompey and the conquest of Asia Minor.

3. Caesar

a. His early life. b. Conquest of Gaul and Britain. c. His return to Rome. d. Defeat and death of Pompey. f. Death of Caesar and funeral oration of Anthony.

4. Augustus and the establishment of an empire.

5. Conditions of life under the empire.

a. Home life; dress, conveyances, baths, houses, the villa, education. b. Amusements: the triumph, the gladiatorial combat, the games of the arena.

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II. The Later Empire.

1. The great emperors, Trajan, Hadrian and Constantine.
2. Spread of Roman language and law.
3. Growth of Christianity.

III. The Germans.

1. How they lived. 2. Their dislike for close neighbors.
3. The comitatus of the war leader. 4. Introduction of Christianity among them.
5. How they over ran the Roman Empire.
 - a. The Goths. b. The Vandals. c. The Lombards.

IV. The Northmen.

1. Hengist and Horsa and the conquest of England.
2. St. Augustine and the conversion of the English.

V. The Franks.

1. Mohammed and the growth of the new religion.
2. Charles Martel and the battle of Tours.
3. Charlemagne and his crowning at Rome.

VI. England.

1. King Alfred and the Danes. 2. Canute. 3. Ericson and the discovery of America.

VII. Mediaeval Life.

1. The manor or villa.
2. The lord; his castle, his retainers, and his amusements.
3. Relations of lord and vassal.
4. The church: the monks, their work, cathedrals, relations of the clergy to each other.
5. The village: the fields, occupations of the people, care of stock, taxes, education of the children.
6. Chivalry.
 - a. The knight: his education, armor, what he did, regard for women, ideal of a true knight. b. The tournament. c. Songs of chivalry.

References; See list for latter part of the Fourth Grade.

A. Books appreciable by children.

Hall, Viking Stories. Rand, McNally.

Harding, Story of the Middle Ages. Scott, Foresman & Co.

Guerber, Stories from the English. American Book Co.

Kemp, History for District and Graded Schools. Ginn.

Mabie, Norse Stories. Dodd, Mead & Co.

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B. Books for teachers.

- Bury, History of the Roman Empire. American Book Co.
 Capes, Age of the Antonines. Scribners.
 Duruy, History of the Middle Ages. Holt.
 Emerton, Introduction to the Middle Ages. Ginn.
 Lacroix, Manners and Customs of the Middle Ages. Appleton.
 Robinson, History of Western Europe. Ginn.
 Seignobos, The Feudal Regime. Holt.
 See also the biographies of particular men.

English History.

I. The Norman Conquest.

1. Rollo and the settlement of the Normans in France. 2. Harold and his oath to William. 3. William the Conqueror: the conquest, Domesday Book, the oath at Salisbury. 4. Henry I.

II. The Crusades.

1. The custom of the Christians to visit the Holy Land. 2. Conquest of Jerusalem by the Turks, profanation of holy places, treatment of Pilgrims. 3. Pope Urban and the preaching of the first crusade. 4. Peter the Hermit, and Walter the Penniless.
5. Richard the Lion-hearted.
 - a. His character. b. His method of getting money, —Jews, towns. c. His work in the Holy Land, Saladin. d. His quarrel with Philip IV of France. e. His shipwreck and capture. f. His ransom. g. What his work did for England.
6. The Children's Crusade. This has very little historical significance, aside from showing the fanaticism of the time, but it will be very interesting to children of this grade.

References. See preceding list.

A. Books appreciable by children.

- Blaisdell, Stories from English History. Ginn.
 Brown, Story of an English Grandfather. Public Schools Publishing Co.
 Church, The Crusaders. Macmillan.
 Freeman, Old English History. Macmillan.
 Kemp, History for District and Graded Schools. Ginn.
 Tappan, England's Story. Houghton.

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B. Books for teachers.

Cox, *The Crusades*. Longmans.

Freeman, *Short History of the Norman Conquest*. Oxford.

Greene, *Short History of the English People*. Harper.

Gray, *The Children's Crusade*. Houghton.

Lacroix, *Manners and Customs of the Middle Ages*. Appleton.

Robinson, *History of Western Europe*, Ginn.

Good historical fictions:—Davis, *God Wills It*. A story of the first crusade. Scott, *Ivanhoe*. Scott, *The Talisman*, a story of the third crusade in which Richard of England is the hero.

GEOGRAPHY AND NATURE STUDY

North America, Including Dependencies of the United States.

Having gained some familiarity with the world as a whole, this year will be devoted to a study of the industrial and commercial life of the United States and its dependencies, Canada, Alaska, Mexico, Central America, and the West Indies. The plan is that of a radially outward movement from home. Topics are selected with a view of emphasizing those human activities which have so much to do with American life. It should not be the aim in this grade to study these industries in a detailed and exhaustive way lest the study become formal and meaningless.

In brief the treatment shall include the localization and distribution of industries and resources, the geographical conditions which favor or hinder their operations, the uses and value of the product, the effect upon distribution of population, the construction of commercial routes, the demands of complementary productive areas together with the benefits of exchange to people generally. Many concrete illustrations should be given.

This work should include considerable information relating to topography and climate and call for simple freehand sketches. Important commercial lines should be traced and so far as possible the inter-relations with needs and life should be emphasized.

I. Drainage.

- 1 Atlantic system:—Mississippi River studied as to flood plains, levees, jetties, delta, and navigation. Merrimac River studied as to water power.

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2. Pacific system. 3. Arctic system.

II. Coast line.

Comparison of eastern and western coasts as to number of harbors and nearness to foreign ports. Comparison of northern and southern Atlantic harbors as to character.

- a. Northern harbors, deep and well protected.
- b. Southern harbors, shallow and poor.

III. Population.

Distribution due to climate, topography and coast line.

IV. Vegetation and animal life.

1. Tundra region. 2. Forest regions of northern United States and southern Canada. 3. Forest regions of south-eastern United States.
4. Sub-tropical forests of Central America. 5. Big trees of California. Forest reserves of United States. Purpose of.
6. Animals—musk ox, bear, deer, seal, wolf, coyote, elk, moose, buffalo, mink, beaver, otter and fox. Life of trapper.

V. Occupations.

1. Lumbering—methods of lumbering in north and south compared—life in lumber camp—differences in lumber—uses of lumber,—naval stores,—maple sugar.
Centers of manufacture and export—Grand Rapids, Chicago, Minneapolis, Pensacola, San Francisco, Bath, Portland, etc.
2. Agriculture.
Regions considered as to slope, soil temperature and rainfalls.
 - a. Wheat. Conditions favorable to its growth. Leading wheat regions. Milling and shipping centers—Minneapolis, Duluth, Milwaukee, Toledo, Chicago, Winnipeg and Montreal—location dependent upon proximity to wheat fields, coal or water power, and ease of transportation.

Routes of transportation.

Sault Ste. Marie and Erie Canals as factors in water transportation of wheat,—foreign countries dependent upon United States,—chief railroad routes,—ports for shipping wheat to other countries.

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- b. Same for other cereals—corn, rye, oats, and barley; study of related industries as hog raising.
Manufacturing of distilled products, starch, glucose, etc.
 - c. Cotton.
 - 1. Conditions necessary for growth—location of cotton fields—life of Negro in connection—utilization of cotton seed—foreign countries dependent upon United States for cotton.
 - 2. Centers for shipping raw cotton. New Orleans, Savannah, Galveston and Charleston.
 - 3. Centers of manufacture and export—reasons for industry in New England—Fall River, Lowell, Lawrence and Manchester. Growth of manufacturing industry in the south—Columbia, Spartansburg Charlotte, Atlanta and Columbus.
 - b. Sugar-cane.
 - 1. Conditions necessary. Louisiana, Texas, Hawaiian Islands and Philippine Islands.
 - 2. Sugar shipping ports—New Orleans, Honolulu and Manila.
 - 3. Sugar refining cities. Brooklyn, Boston, Philadelphia, and San Francisco.
 - 4. Routes of transportation from region producing to region refining—distribution of the finished product.
 - e. Sugar beet.
 - 1. Compare conditions necessary for growth with conditions for the growth of sugar cane—important regions.
 - 2. Comparison of the amount of sugar produced with the amount of sugar consumed in the United States leads to the question of source of balance of sugar.
 - f. Same plan for other agricultural products—rice, orchard and tropical fruits together with canning and preserving the same, garden vegetables and truck farms tobacco, olives, vanilla, coffee, indigo, rubber, agave, cacao and spices.
 - g. Irrigation and its relation to agriculture.
3. Grazing.
- a. Great Plains—ranch life in connection—wool shipped

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east for manufacture—dairying regions, butter and cheese making.

- b. Packing house centers. Chicago, Kansas City, St. Louis, Omaha.
 - c. Transportation. Cattle from the plains to the packing house—distribution of products to parts of United States and foreign countries. Hides sent to New England.
 - d. Centers of wool and leather manufacture—Lowell, Lynn, Haverhill, Brocton and St. Louis. Source of balance of leather and wool needed in manufacture.
4. Mining.
- a. Coal and iron—important regions—life of miners, coke making, relation of coal and iron to other industries, character of manufactures of New England compared with manufactures of regions nearer iron and coal.
 - b. Centers of manufacture and export. Philadelphia, Birmingham, Wheeling, Chicago, Springfield, Mass., Detroit, etc. Study a few centers as types.
 - c. Transportation—ore from Lake Superior regions to coal regions—distribution of finished products.
 - d. Other minerals. Copper, zinc, lead, silver, salt, building stones, petroleum, including a study of pipe lines, refineries, and Standard Oil Company;—clay and manufacture of pottery at Trenton, East Liverpool and Cincinnati;—sand and manufacture of plate glass at Pittsburg.
5. Fishing.
- a. Cod, herring and mackerel on New Foundland Banks—Salmon in Columbia and Yukon rivers—shad in Hudson and Delaware rivers. lobsters off New England coast, oysters in Chesapeake Bay, sponges off the coast of Florida, whale fishing in Arctic waters, seal fishing on Pribilof Islands.
 - b. Centers of fish trade—Gloucester, Baltimore, St. Johns, Seattle, and Victoria.
6. Manufacturing and commerce—summarized by study of commercial centers as determined by proximity to raw materials, cheap power including the influence of the fall

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line, facilities for transportation, and relation to foreign ports; influence of the Panama Canal.

a. Commercial centers.

New York City, Chicago, Philadelphia, Boston, St. Louis, New Orleans, San Francisco, Havana, Vera Cruz, Honolulu, Manila, Sitka, and Seattle.

VI. United States and dependencies.

Government, diplomatic and commercial relations with other countries, immigration, postal service and life saving service, Annapolis, West Point.

VII. Other countries of North America.

Summarized by study of government and life of people—products and occupations as determined by topography and climate—exports and imports—routes of transportation—commercial centers.

VIII. Scenic Centers.

White Mountains; Adirondack Mountains, Niagara Falls, Thousand Islands, Mammoth Cave, Pike's Peak, Grand Canyon, Yosemite Valley, and Yellowstone Park.

References for North America.

Stanford, Compendium of North America, Vols. I and II.

Stanford, London.

Stanford, Compendium of Central and South America Vol. II for Mexico, West Indies and Republics of Central America. Stanford, London.

Lyde, North America, A and C. Black, London.

Lyde, Man and his Markets. Macmillan.

Mill, International Geography, Appleton.

Chisholm, Handbook of Commercial Geography. Longmans.

Herbartson, North America. A. and C. Black, London.

Tarr and McMurry, Complete Geography, Macmillan.

Dodge, Advanced Geography, Rand, McNally.

Carpenter, North America. American Book Co.

Rocheleau, Commercial Geography. Educational Publishing Company.

World Almanac, New York World, New York.

Longmans, New School Atlas, Longmans.

McMurry, Type Studies in Geography.



THE PLATONIAN SOCIETY, 1907



FIFTH GRADE
NATURE STUDY

Meteorology.

Observation and record of slant of sun's rays. Reason for the change of slant. Relation of slant to temperature. Length of day.

Physics and Chemistry.

Study of ferments, applied to bread making and making of vinegar.

Sterilization in canning and preserving. Sugar as a germicide.

Effect of heat on starch. The boiling point.

Making of coke. Making of blue print herbarium to record succession of wild flowers.

Distribution of sugar in plants—sugar-cane, beet and maple.

Water power in manufacturing.

Study lever, pulley and inclined plane as illustrated in agricultural machinery.

Elementary Forestry.

Study of community life of trees developing elementary principles of forestry—hard and soft woods—study of different woods as to their uses and relative strength.

Plant Life.

Study of mosses and lichens in relation tundra regions, Experimental work as to effect of heat, light, soil and air upon germination of seeds and growth of plants.

Weeds in relation to the school garden—seed dissemination.

Blossoms studied in relation to plant and to man.

Animal Life.

Birds recognized by plumage and song. Economic value and structural adaptation of birds.

Insects and animals helpful to the garden—Lady-bug, earth-worm, toad, etc.

Insects and animals harmful to the garden—cut worm, slug, aphid, cucumber beetle, cabbage worm, corn worm, potato beetle, etc.

Insects of the house—fly, moth, mosquito, ant and roach.

Community life of bees and ants. Aquarium life studied incidentally.

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Astronomy.

Phases of the moon. Evening and morning stars. Constellations.

MATHEMATICS

The spirit of the work is much the same as for grade four except that larger emphasis is put on the application of the established number facts than on the drill work. The great purpose is to enlarge by actual use the child's appreciation of, and his power to use, number with its symbolism and processes as a means of solving the quantitative problems of his own experience. These problems are drawn from the child's weighing, measuring, gardening, drawing, and making activities and the expenditures for the needs in his daily life. Abstract numbers are used constantly, but just as constantly are they interpreted in terms that are concrete. It is intended that understanding shall be back of all manipulation. The scope of the work for this year includes:

Mastery of such number facts in the field beyond 100 as are of especial use.

Mastery of "tables" of $12\frac{1}{2}$, and an association by rectangles and other concrete representations with relations of one-eighth, one-fourth, one-half, three-eighths, etc.

Counting to 100,000 with the new units as the means. Most work, however, in field below 10,000.

Multiplication and division, partition, by small numbers.

Commutative law, reference to the interchange of multiplicand and multiplier, constantly emphasized giving a basis for unity of partition and division procedure. Partition associated with both multiplication and division symbolism.

Addition and subtraction of commonest fractions as occasion arises. Always teach meanings of processes through concrete illustrations.

Multiplication of commonest fractions, showing meaning concretely.

Simple problems in partition and division of fractions, very largely in terms of things, with meanings clearly illustrated. The equation may be introduced by considering portion in multiplication form.

Decimal notation as usage calls for.

Always emphasis on *common measures*, or, abstractly, common

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factors, leading to ideas of highest common factor and least common multiple.

Following are a few typical sources of material for problems which are real, alive, and typical of every-day problems of our environment:

Newspapers—profit in selling.

School garden—cost of seed, value of product, profit.

Children's problems of earning, purchasing and saving.

Games—ring toss, dominoes, bean bag, lotto, games of the Cincinnati Game Co., Cincinnati, Ohio.

Drawing made to scale with the problems involved. Use of scale in reading maps.

Simple economic problems in connection with the child's life—cost of food, clothing, incidentals for children for one year using sample conditions that are high, low and average. Cost of flour, meat and coal for a family for one year, using high, low and average.

Simple industrial problems drawn from geography.

Transportation—comparison of rates by rail and water.

Bills and accounts brought in by children from the current business life of home and the community.

The following text will be found suggestive of the method of work employed, remembering, however, that *problems must be adapted to local conditions*.

Young and Jackson's Arithmetics—Appleton & Co., Chicago.

Smith's Arithmetics,—Ginn & Co., Chicago.

Rational Arithmetics, Myers and Brooks—Scott, Foresman—Chicago.

Elementary Agriculture with Problems in Arithmetic, Hatch and Hazelwood—Row, Peterson & Co., Chicago.

MANUAL ARTS

As in preceding grades, the work in manual arts is the out-growth of needs for expression. Its content, therefore, is made up very largely of problems arising in other subjects of study and in the seasonal demands of the year.

Weaving, Sewing, Winding: Use raffia, rattan, splints and card board for making baskets, boxes, and useful articles for the home.

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- Measuring, Folding, Cutting, Fastening: Use cardboard and paper for making illustrative and useful projects, as, models in connection with study of history and literature, boxes, lanterns, portfolios and book repairs.
- Sewing: Aprons, holders, towels, bags, penwipers, costumes and furnishings for a doll house, using appropriate materials.
- Woodworking: Useful and illustrative projects, as, letter files, plant stand, broom holder, windmill, water wheel, doll house with furnishing, etc. Tools for Clay work
- Drawing: Grows out of child's interests and experiences. History and literature furnish the stimulus for pictorial representation while the crafts furnish the basis and initiative for design. Seasonal coloring in landscapes; study of simple animal and plant forms to be used as basis for design; special study of the human figure in action; study of line and space relations in design for rectangular shapes. Illustration of stories: *Pied Piper*; *Paul Revere's Ride*; *The Golden Touch*. Special study of costumes of mediaeval times in response to needs in history. Study of architecture and historic ornament: Mohammedan and the *Alhambra*; Romanesque and the *Apostles' Church, Cologne*.
- Modeling: Vase forms, tiles, representation of plant and animal forms in low relief. Statuettes illustrative of work in history and literature.
- Picture Study and Study of Other Masterpieces of Hand Work. Type masterpieces of all forms of hand work studied in connection with efforts of the children, as indicated in earlier grades. Reproductions from the masters in painting are studied in these upper grades: From the suggested story side; for composition and symbolism; for characteristics making it a masterpiece; with a brief life of the artist. Among the pictures used in this grade are the following: *Spring, Daubigny*; *Return to the Farm, Troyon*; *Oxen Ploughing, Duprey*, and *Bonheur*; *The Last Supper, da Vinci*; *Avenue of Trees, Hobbema*; *The Mill, Ruysdael*; *A Kabyl, Schreyer*; *Angels, Fra Angelico*.
- Cooking: Canning and preserving of fruits; making pickles; making of cane, beet, and maple sugars; Making of vinegar and the study of fermentation; starch—cooking of cereals; wheat

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flour made into yeast bread; washing of the flour in water to determine the presence of gluten; making of candy. House-keeping in connection with the serving of luncheons and the care of dishes, utensils and table linen. Attention to the daily luncheons of children; cultivating desirable behavior in the luncheon; noting proper bills of fare.

MUSIC

Rote Songs. Art songs continued as in fourth grade.

Syllable Songs. To be used to introduce new chromatics and rhythms.

Rhythm Drills and *Scale Drills* as needed.

Notation. Writing scales of C, G, D, A, E, F, B flat, E flat and A flat.

Tone Testing. Oral and written.

Dynamics occurring in songs and exercises explained and taught.

Original melody and song construction: Study of simple song forms and of folk songs.

Sight Reading. Songs and exercises found in Book II, Modern Music Series, Smith—Silver, Burdett & Co., Chicago. Book II, Educational Music Course, Ginn & Co., Chicago; and School Songs by Grades—Scott, Foresman & Co., Chicago, will be used for supplementary material.

Program Music. Programs and concerts to be given from the material used in regular class work.

History of Music. In part through program music. Folk songs of peoples studied in history. Studies of Mozart, Abt and Reinecke. Study of the chant. Beginnings of Harmony. Stories of the first operas. Minstrels—Minnesingers, Troubadors, and others suggested by studies in history and literature. The development of musical instruments.

Orchestral practice for those playing instruments.

PHYSICAL TRAINING

In the fifth and sixth grade period, boys tend to develop a little more slowly than girls. This is a time when there is developing the possibility for close coordination between muscular and mental action. The aim of the work is to develop consistently that interest, now prominent, in organization and cooperation in work requiring speed, skill and strength.

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General Exercises: Simple military tactics. Breathing and relaxing work. Step positions in many combinations for poise and ease. Use of clubs, bells, wands and balls. Pole climbing. Simple horse exercises.

Games: Those used in third and fourth grades; Three Deep; Jumping Relay; Follow Ball; Ball games requiring team work, as, basket ball; Fox and Hounds.

For further material on Gymnastics and for games, see the list of sources in the Appendix at the end of this catalog.

Hygiene: Care of skin; ventilation; respiration; bathing; care of person after games and when heated or fatigued.

GRADE VI.

ENGLISH

Literature and Reading. The same general remarks about English, and the work in literature and reading in particular, made at the beginning of the fifth grade English, apply also in this grade.

Selections suggested for class study.

Coleridge—Rime of the Ancient Mariner.

Hale—Man Without a Country.

Hemans—Landing of the Pilgrims.

Holmes—One Hoss Shay.

Krout—Little Brown Hands.

Lowell—Sir Launfal; Story of Parsifal; The Dandelion.

Longfellow—Birds of Killingworth.

Macauley—Horatius at the Bridge.

Poe—Gold Bug; Descent into the Maelstrom.

Ruskin—King of the Golden River.

de la Ramee—Nurnberg Stove.

Tennyson—Coming of Arthur; Passing of Arthur; Lady Clare; The Lady of Shalott.

Whittier—The Barefoot Boy.

Scott—Ivanhoe.

Selections from: "Birds and Bees"—Burroughs; "Vicar of Wakefield" Goldsmith; "Pickwick Papers"—Dickens; "Innocents Abroad" Clemens; "Sketch Book" Irving; "Iliad" Lang's translation; "Dog of Flanders"—de la Ramee.

Famous Rides in Poetry:

Paul Revere's Ride—Longfellow; "John Gilpin's Ride"—

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Cowper; Sheridan's Ride—Read, "How They Brought the Good News from Ghent", Browning.

List of books for individual reading:

Blanchard, A. E. Girl of '76, Wilde.

Boyesen, Boyhood in Norway, Scribners

Bostock, Training Wild Animals, Century.

Baldwin, Four Great Americans. American Book Co.

Cervantes, Don Quixote, retold by Parry, Lane, N. Y.

Clemens, Tom Sawyer, Harper; Prince and Pauper, Harper.

Clark, Boy Life in the United States Navy, Lothrop, Lee and Shepard.

Custer, The Boy General, Scribners.

Dickens, Little Nell, American Book Co.

Forbush, Boy's Life of Christ, Funk & Wagnalls.

Garland, The Long Trail, Harper.

Cotton, Elizabeth or Exiles of Siberia, Hurst.

Henty, Wulf, the Saxon, Scribners.

Jameson, Toinette's Phillip, Century.

Perry and Beebe, Four Great Pioneers, American Book Co.

Seton-Thompson, Wild Animals I have Known, Scribners.

Smith, Mary Wells, Young Painters of Old Hadley, Little.

Verne, Around the World in Eighty Days, Lee.

Wiggin, Rebecca of Sunnybrook Farm, Houghton.

Warner, Being a Boy, Houghton.

Language. All technical points previously taught are reviewed thoroughly through constant application.

The material used is the same as for the fifth grade.

Drill in variety of expression and exactness of statement is continued from the preceding grade. The efforts of the child at correct expression are constantly kept in mind and, as in the fifth grade, terms are given and definitions formulated as the needs arise. Pupils are taught the use of metaphor, simile, antithesis and personification.

Short quotations are studied as to the portrayal of sound, color, motion, odor, taste and distance. Other passages are studied as to wit, humor, pathos, strength, or simplicity.

The use of the dictionary is continued. The leading vowel and consonant sounds are learned and some attention is given to prefixes and suffixes.

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Helpful suggestions may be found in "Foundation Lessons in English", Book II., by Woodley.

HISTORY

In the Sixth Grade the thread of European history should be followed through England as being the country most nearly connected with American life; should follow the commercial expansion to America, and through the explorers of France, England and Spain take up American history as a phase of European history of which it formed a part.

- I. The Feudal System and its defects.
 1. The method of holding land. 2. The Organization of a feudal army.
 3. Taxation and the incidence of knight's service.
 - a. Aids. b. Hardships. c. Marriage. d. Escheats. e. Scutage.
 4. Opportunity of abuse. How King John abused his feudal privileges. 5. The revolt of the Barons and the granting of the Great Charter.
- II. Parliament,—Simon de Montfort.
- III. The Hundred Years' War.
 1. The Black Prince. 2. Agincourt. 3. Joan of Arc. 4. The long bow. 5. Rise of the individual soldier. 6. Use of gun powder.
- IV. The New World.
 1. Columbus, his earlier experiences, his efforts to secure aid, his voyages.
 2. Cortez, Pizarro and the conquest of Mexico and Peru.
 3. De Soto. 4. The Cabots and what they did.
- V. The Reformation and its results.
 1. The taxation of Germany by the Curia, including the sale of indulgences. 2. Luther and the way he developed a following. 3. Henry VIII. and the Reformation in England. 4. Elizabeth and the danger from Spain.
 5. Drake, Hawkins and Raleigh and their adventures.
- VI. Settlement of the New World.
 1. The English at Jamestown and Plymouth. 2. The Dutch at New York.
 3. The French.
 - a. Cartier. b. Champlain. c. Joliet and Marquette.

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d. La Salle and Tonti.

VII. History of Illinois.

1. Founding of Cahokia and Kaskaskia. 2. Fort Chartres and the Introduction of slavery. 3. Capture by the English and Pontiac's conspiracy. 4. George R. Clark.
5. Continue with Mather's text, selecting what seems applicable and drawing in all the interesting detail possible. Omit merely constitutional changes.

References.

A.

- Church, Stories from English History. Macmillan.
 Blaisdell, Stories from English History. Ginn.
 Parkman's Histories. Little.
 Guerber, Stories from the English.
 Catherwood, Heroes of the Middle West. Ginn.
 Mather, Making of Illinois. Flanagan.
 McMurry, Pioneer History Stories. Public Schools Publishing Co.
 Fiske, Discovery of America. Houghton.
 Moses, Illinois, Historical and Statistical. Fergus Printing Co.
 Greene, Short History of the English People. Harper.
 Cheney, Short History of England.
 Robinson, History of Western Europe. Ginn.
 Robinson, Reading I. Ginn.
 Adams, Mediæval Civilization. American Book Co.
 Fisher, History of the Reformation. Scribners.
 Henderson, Short History of Germany. Macmillan.

GEOGRAPHY AND NATURE STUDY

South America.

Geographical principles should be emphasized during this year. South America is one of the easiest continents to teach and can be used to illustrate the laws governing winds, temperature, and rainfall. The continent should be considered as a unit and as many principles taught as the maturity of the pupils will warrant. These principles should later be applied to study of other continents. The great wind systems of the world should be studied with especial reference to the climate of South America.

Modeling and map drawing should receive much attention in this grade. Location should be taught incidentally and extent by comparison. The industries, commerce and resources should

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receive much attention and the continent should be taught according to the physiographic rather than the political divisions.

Outline for South America.

Position and size. Latitude and Longitude emphasized.

Surface. North America used as a basis of comparison.

Coast line.

Climate.

1. Winds and belts of calms, relation to the great wind system of the world, migration of the belt of calms and its effect.
2. Rainfall, effect of mountains upon rainfall, regions having two rainy and two dry seasons, Atacama desert and its cause.

Drainage.

Rivers of Atlantic coast compared with rivers of Pacific coast.

Amazon Valley or Selvas region.

1. Size of river, navigability, tributaries, detritus, Mississippi river as basis of comparison.
2. Vegetation, tropical plants and their products, rubber, vanilla beans, cabinet woods, dye woods, etc.
3. Animal life—Adaptation to environment.
4. Occupations, methods by which natives obtain products, relation to human life.
5. Para, chief port for region, distribution of products, commercial routes.

Parana Valley or pampas region.

1. Importance of river in productive temperate regions, relation of climate to human life.
2. Vegetation, pampas grass and agricultural products.
3. Animal life, cattle and sheep, comparison with stock raising in the United States.
4. Buenos Ayres, chief port for region, distribution of products, routes.
5. Importance of Argentine Republic and its commercial relations with the United States.

Orinoco Valley or Llanos region.

Products and occupations.

Guiana Highland.

Products and occupations, absence of large towns in the highlands noted.

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Brazilian Highland.

1. Surface features, influence of highland upon rivers.
2. Products, coffee, rubber, cotton, hides, gold, diamonds and tobacco.
3. Rio Janeiro, chief port for region, location accounted for, commercial routes and distribution of products.
4. Brazil's place in the commerce of South America, relative value of exports to and imports from the United States, reason.

Andes Region.

1. Mineral products, gold, silver, coal, tin, copper, nitrate of soda.
2. Vegetable products, cacao, rubber, cinchona, cereals, and tobacco.
3. Animals, llama, alpaca, condor, cattle and sheep.
4. Valparaiso, Santiago and Lima the chief cities, importance accounted for.

References for Geography of South America.

Stanford, Compendium of Central and South America, Vol. I. Stanford, London.

Longman, Gazetteer, Longmans.

Mill, International Geography, Appleton.

World Almanac, New York World, N. Y.

Carpenter, South America. American Book Co.

World and its People, Book X. Silver, Burdette and Co.

Chisholm, Handbook of Commercial Geography. Longmans.

Europe.

Europe should be thoroly studied on account of its historical and commercial importance. The grand division should be studied first as a whole noting carefully its contour, relief, drainage and climate. The study should proceed regionally as far as possible and comparisons should be made with North and South America. Use principles developed in South America.

I. Position.

II. Size.

III. Importance.

1. Home of powerful nations.
2. Original home of the people of the United States.
3. Source of our foreign population.

IV. Surface.

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V. Climate.

1. Comparison with climate of North America. 2. Winds.
3. Influence of the Gulf Stream. 4. Rainfall. Influence of mountains.

VI. Drainage. Rivers compared with the rivers of North America and South America

VII. Coast Line. Advantages of irregular coast line.

VIII. Vegetation and animals.

1. Tundra region and life of Lapps, reindeer and furbearing animals.
2. Forest region of Northern Europe, northern limit of forests compared with limit of trees in North America, comparisons with the forests of United States, animals found in forest,—wolf, bear, deer, fox, etc. Care of forests in Germany and France contrasted with methods in the United States.
3. Forest region of Southern Europe,—character of trees, comparison with trees of northern Africa,—animal life, chamois, goats, etc.

IX. Occupations.

1. Lumbering, kinds of trees and uses, comparison with lumbering in the United States. Centers,—St. Petersburg, Riga, Christiana, Archangel, etc. Routes of transportation,
2. Agriculture,—suitable regions in regard to slope, soil, temperature, and rainfall,—northern lowland, southern Europe, valleys of the Danube, Po, Rhone, etc.—climate differences will result in varying products.
 - a. Wheat.

Conditions for growing wheat in the United States. Probable location of wheat fields in Europe. Black earth region of Russia Austria-Hungary, France, Germany, England, etc.,—comparisons of amount of wheat produced by United States, eastern Europe and Western Europe. Comparisons of population and general conclusion that wheat must be sold by United States and eastern Europe to Western Europe.

Wheat markets,—location near wheat fields and where shipping is easy,—Odessa, Danzing, St. Petersburg and Budapest,—routes of transportation, bringing in rivers,

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canals, seas and railroads—advantages of northern and southern ports compared.

b. Rye.

Life of peasants of Russia, France and Germany in connection.

c. Flax.

Conditions of growth, production of Europe compared with that of the United States, Ireland, Belgium, Netherlands, France, Germany, Austria, Russia, etc.

Manufacturing centers—Belfast, Ghent, Riga, Lille, St. Petersburg etc. Location accounted for in regard to flax districts, coal mines and ease of transportation.

d. Mulberry.

Reasons for cultivation. France and Italy. Comparison with cultivation in the United States, economic difference. Centers of manufacture and export,—Lyons, Havre, Marseilles and Milan. Location accounted for. Routes of transportation.

e. Grapes.

Value of vine,—vineyards and life in connection, France, Germany, Italy, Spain, etc.

Centers of manufacture and export,—Bordeaux, Malaga, Oporto, Cologne and Vienna.

f. Other agricultural products,—hops, cork, sugar beet, olives and fruits.

3. Grazing.

Regions suitable,—British Islands, France, Denmark, Holland and Alps,—butter and cheese markets—life in connection—Alderney and Jersey cattle from the Channel Islands. Shetland ponies from the Shetland Islands. Normandy horses from France.

4. Mining.

Coal and iron—effect upon other industries.

Kiel and Glasgow—coal, iron, and proximity to the sea,—shipbuilding.

Manchester—coal, iron and proximity to receiving port for raw cotton—cotton manufacturing.

Brussels—coal, iron and proximity to wool—growing region, carpet manufacturing.

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Sheffield—coal, iron—I. X. L. cutlery.

Essen—coal, iron—Krupp guns.

Same for other centers of export and manufactures, routes of transportation, comparison with like industries in the United States.

Other mineral products.

Copper, lead, tin, salt, petroleum, gold, chalk, clay and Haviland China, quartz and Bohemian glass.

5. Fishing.

North Sea fisheries, comparisons with Newfoundland fisheries—sardine fisheries and life in Brittany, coral and sponges.

Centers—Bergen, Hull, Yarmouth, Bordeaux, etc.

6. Manufacturing.

Centers of manufacturing and export shown to depend upon:—

a. Accessibility to raw material. b. Coal or water power. c. Ease of transportation.

Comparison of character of manufactures of Europe with those of United States.

7. Commerce—commercial centers and trade relations between United States and Europe used to summarize preceding topics—London, Liverpool, Hamburg, Paris, Vienna, Constantinople, Berlin, etc. Elements which have combined to make center important noted—purpose of consuls.

X. Immigration.

XI. Government of countries and colonies,—diplomatic relations with United States—ambassadors.

XII. Scenic Centers.

Rhine, Alps, Mountains of Norway, Trosach region, Venice, Rome, Mt. Vesuvius, Naples, Paris, Monaco, Athens, etc.

Conclusion.

1. What we owe to Europe.
2. What we have given to Europe.

References.

Stanford's Compendium of Europe, Vol. I and II.

Lyde, British Isles, and Lyde, Europe. A. C. Black London
Carpenter, Europe. American Book Co.

Longmans, Gazetteer. Longmans.

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Mill, International Geography, Appleton.
 Chisholm, Handbook of Commercial Geography. Longmans.
 Herbartson, Europe. A and C. Black, London.
 World Almanac. New York World, N. Y.
 Tarr & McMurry, Complete Geography. Macmillan.
 Dodge, Advanced Geography. Rand, McNally & Co.

NATURE STUDY

Meteorology.

Rain gauge used to measure rainfall. Objective and graphic representation of data—annual rainfall.
 Areas of light and heavy rainfall—influence on vegetation.
 Winds—direction—relation to temperature and precipitation.
 Great wind system of the world.
 Weather bureau and its service to man. “Highs” and “lows” of the weather map.

Physics and Chemistry.

Study of acids and alkalies in relation to cooking.
 Effect of heat on albumin. Solubility in hot and cold water.
 Heat—causes and effects—relation to great wind system—combustion and fuels.
 Air—composition and properties—the barometer—practical applications of knowledge of pressure to the pump and siphon. Ventilation.
 Steam and wind as sources of power in transportation and manufacturing.
 Study of magnets and the compass—the making of gunpowder. Dyeing related to colonial industries.

Plant Life.

Study of some text in Elementary Agriculture.
 Making of hot bed with heat from decomposition. Transplanting of early garden vegetables. Fertilizers.
 Blossoms of fruit trees studied in relation to fruit crop.
 Budding and grafting of trees.

Animal Life.

Culture of silk worms. Mole in relation to lawn and garden.
 Insects in relation to agriculture—grasshopper, tent caterpillar, curculio, the borers, apple maggot, scale insects chinch bug, aphid, beetles, moths and butterflies.
 Aquarium life studied incidentally.

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Astronomy.

Proofs of earth's shape—daily and yearly motions and their results.

Name and locate the visible planets and a few of the important constellations.

MATHEMATICS

The application of number knowledge to the solution of the quantitative problems that arouse the pupil's interest is the principal work of the grade. Naturally the selection of the material for consideration is all-important. Personal and local experiences and institutions supply the major portion of the material. So far as is possible the pupils gather and verify data. Some development of power to investigate conditions, and to discriminate between important and unimportant details, is sought. Such constructive and inventional geometry as concerns the facts of observation about lines, angles, and other form relations, such relations as have been used concretely in hand work as occasion arose, are now more specifically taken up, leading to the consideration of surface mensuration for common forms.

The new number theory taken up in this grade follows:

Counting to millions. Most work, however, in field below 100,000.

General addition and subtraction of fractions.

General multiplication of fractions.

Problems in partition and division of fractions treated through the equation, and pointing to the general method.

Decimal notation for 1000ths, if necessary, but higher places are better postponed to the seventh grade if convenient.

General highest common factor and least common multiple by factoring.

Important per cent with their fractional equivalents.

Following are a few typical sources of material for problems furnished by the experience and environment of children in our schools:

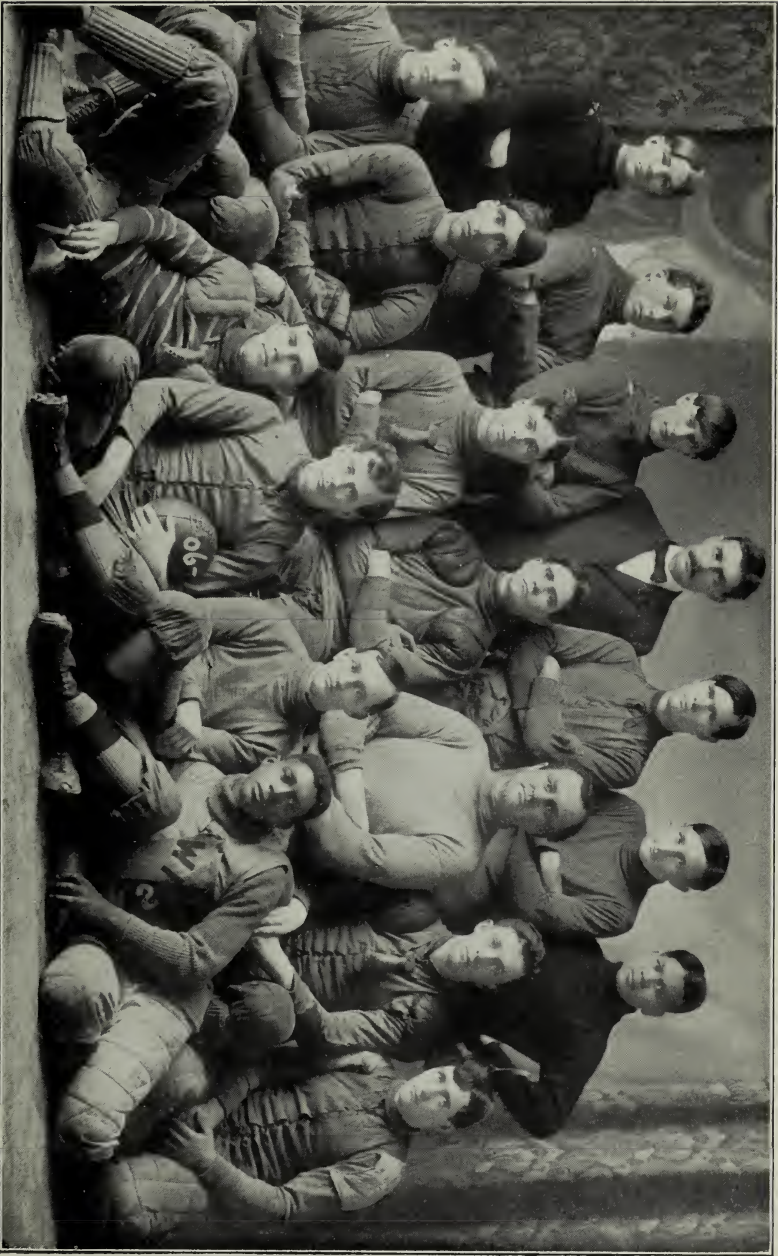
Geometrical forms in rooms, on grounds, at home, in town.

Forms common in manual training, drawing, decorative design, etc.

Local land forms, town and farm. National land unit and the development of farm sizes and shapes.



THE BASKETBALL SQUAD, 1907



THE FOOTBALL SQUAD, 1907

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Products and marketing, personal and local. Consumption, importation and exportation of local products and needed materials.

Simple phases of local business, gardening, grocery, butcher shop, hardware store, book store, coal yard, bakery, dairy, etc.

Local passenger and freight transportation.

Local wages and incomes, dressmakers, shoe repairers, physicians, lawyers, dentists, teachers, clergymen, etc.

Home economics, fruit canning and preserving, dress making etc.

Personal and family expenses.

Postal business, local and personal. Money orders.

Express business, local and personal.

Furnishing special rooms, houses, etc.

Local factories—cigar making, potteries, etc. Large, simple items.

Local rainfall. Average monthly and annual rainfall.

Pressure of the air. Problems connected with nature study.

The following texts will be found suggestive of the method employed, remembering, however, that *problems must be adapted to local conditions*.

Young and Jackson's Arithmetics—D. Appleton & Co., Chicago.

Smith's Arithmetics—Ginn & Co., Chicago.

Rational Arithmetics, Myers-Brooks—Scott, Foresman & Co., Chicago.

Elementary Agriculture with Problems in Arithmetic, Hatch and Hazelwood—Row, Peterson & Co., Chicago.

MANUAL ARTS

Work continued as in preceding grades, emphasizing needs for expression and broad relationships of the work to life of today and to the large fields of industry and art of which the work is a part.

Weaving, Sewing, Winding: Raffia, rattan, splints, cardboard, flax and silk, are the materials used. The reeling and weaving of silk from the cocoons and the weaving of flax grown in the school garden. Dressing of dolls for illustration of historical costumes. Making of baskets and boxes.

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- Measuring, Folding, Cutting, Fastening:** Cardboard and paper, used for making candy box, lantern, handkerchief box, portfolio: models in connection with history and literature, suit of armor and mediaeval weapons for dramatic representation. Book repairing.
- Sewing, Darning, Cutting:** Bags, apron, holders, towels, one piece of underclothing, buttonholes. Materials appropriate to work chosen.
- Woodworking:** Foot stool, broom holder, window box, screen with burlap panel, model of castle, of fort, of draw bridge, of Viking ship, primitive loom, block printing. Original design of some useful article for home or school.
- Metalworking:** Welding, shaping of bar iron into simple implements and tools, repairing tools, riveting, annealing, etc., simple forge work in iron. Some work in copper, making useful materials. Very little work in Venetian iron.
- Drawing:** Sources of subject matter as in the fifth grade. All work in wood is designed and the mechanical drawing made before going to the shop. Designs include those for work in wood, clay, cardboard, and stencil. Landscape sketching in color and pencil. Illustration of stories. Vision of Sir Launfal; Legend of Sleepy Hollow; King Arthur Stories. Study of printing and illustrating of books, marginal decorations, artistic spacings and texts. The development of the shield and its designs in connection with mediaeval history. Study and making sketches of Colonial costumes, industries and utensils. Simple problems in perspective, elementary composition,—space relations, color values and balance. Study of stained glass windows; making of designs suitable for a window. Architecture and historic ornament—Gothic, Notre Dame and Westminster; Renaissance, St. Peters and the work of Michael Angelo and Raphael.
- Modeling:** Clay and composition material; used in modeling relief maps, candle sticks, vase forms, statuettes illustrative of work in history and literature.
- Picture Study and Study of Other Masterpieces of Hand Work.** Meaning of this work and varieties of studies as stated under this topic in lower grades. See statements under grades III. and IV. Among the pictures especially studied are; The Gleaners and the Angelus, *Millet*; Spring, and the Dance

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of Nymphs, *Corot*; Quest of the Holy Grail, *Abbey*; Sir Galahad, *Watts*.

Cooking: Doughs and batters: Air and egg used to lighten, as in muffins and sponge cake, steam in the popover, and baking powder in biscuits and butter cakes. Colonial cookery: Baked beans, brown bread, hominy, Indian pudding, etc. A salad prepared in the study of olive oil. Meat Soups. Candy. Housekeeping as in fifth grade.

MUSIC

Rote Songs. To be used as observation and study songs.

Syllable Songs. To be used only to present new developments in melody and time.

Rhythm Drills and *Scale Drills*, using major and minor scales.

Notation. Representation of chromatics. Definition and use of sharps, flats, double sharps, double flats and naturals. Defining all time signatures.

Tone Testing. Oral and written.

Dynamics. Taught as they are needed and used.

Original melody and song construction. Study of hymn and ballad forms.

Sight Reading. Continued as in the fifth grade, using the same materials.

Program Music. Programs and concerts to be given with fifth grade.

History of Music. To be given in part through programs and with the fifth grade. Stories of the chorale and chant. Study of the chorale form. Place of music in church services, in social life, in the theatre and in military life. Development of orchestras and bands.

Orchestral practice for those playing instruments.

PHYSICAL TRAINING

Material used in the fifth grade will also be used in this grade. For materials for gymnastics and games, see list in the Appendix. Hygiene: Over exercise; fatigue; rest; sleep: regular habits.

GRADE VII.

ENGLISH

Literature and Reading. The plan of work fully described

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under the English in grade V. is also employed in this grade. See the foregoing statement.

Selections suggested for class study:

Arnold—Sohrab and Rostum.

Dickens—Cricket on the Hearth.

Drake—The American Flag.

Emerson—Concord Hymn.

Goldsmith—The Mad Dog.

Holmes—Evening; Rip Van Winkle; Height of the Ridiculous.

Lamb—Dissertation on Roast Pig.

Longfellow—Courtship of Miles Standish; Evangeline; Footsteps of Angels; A Psalm of Life; Hymn to the Night; Building of the Ship; From My Arm-Chair; The Village Blacksmith; The Skeleton in Armor; Pegasus in Pound.

Poe—The Bells; The Raven.

Shakespeare—The Merchant of Venice.

Southey—The Cataract of Lodore.

Tennyson—The Brook; Enoch Arden.

Washington—Farewell Address.

Whittier—Snowbound; My Psalm; Telling the Bees; The Huskers; The Corn Song; The Ship Builders.

List of books for individual reading:

Aldrich, The Story of a Bad Boy—Houghton.

Austin, Standish of Standish—Houghton.

Catherwood, Old Kaskaskia—Houghton.

Churchill, The Crossing—Macmillan.

Cooper, Red Rover; The Deerslayer;—Rand. The Spy—Appleton.

Dickens, Nicholas Nickleby—Nelson.

Eggleston, The Hoosier Schoolmaster—Judd.

Hapgood, Paul Jones—Houghton.

Hawthorne, Grandfather's Chair—Houghton.

Rice, Mrs. Wiggs of the Cabbage Patch—The Century Co.

Irving, Knickerbocker's History of New York—Crowell.

Kipling, Captains Courageous—Century Co.

London, The Call of the Wild—Macmillan.

Parkman, The Conspiracy of Pontiac—Little, Brown.

Seton, Lives of the Hunted—Scribners.

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Stevenson, Kidnapped—Rand.

Stockton, Buccaneers and Pirates of Our Coast—Macmillan.

Stockton, Rudder Grange—Scribners.

Stoddard, Lost Gold of the Montezumas—Lippincott.

Thwaites, Life of Daniel Boone—Appleton.

Twain, Clemens, Innocents Abroad—American Pub. Co.;
Harpers.

Language and Grammar. As in previous grades, language will be taught as a means of expression and technical points of structure and terminology will be used as *means* and not ends. The content of all oral and written work will be live material, produced for its own sake and not as a mere device for teaching form. It will consist of descriptions and narrations of work done in other subjects, arguments growing out of conflicting view points in various fields, records of experiments in laboratories and school gardens, recipes for cooking and records of cooking tests, accounts of school excursions, reports of studies in reference work, poems written on occasions and sometimes used as songs for which the melodies are also written, dramas written to express interpretation of history or literature, original stories, etc., etc. Much is made of festival occasions as opportunities for original programs by the children.

In the composition work, all the arbitrary forms considered in preceding grades will be reviewed through usage. Attention will be given to the paragraph, variety of expression, figures of speech of the simpler types, beauty of expression, discrimination in diction, form in letter writing, and all other elements involving needs as these arise. Consideration of rhetoric as well as of grammar will be prominent in the work. The following outline will indicate the scope of the work in grammatical principles and terminology to be mastered in rationalizing the work in English for the seventh and eighth grades. A text book, *Modern English, Book II.*, Emerson and Bender, published by Macmillan, will be in the hands of the pupils to be used as a work of reference. Whenever a topic from the grammar outline is taken up, the text will be used as a basis, and when it is desired to consult authority, the text will be available. The habit of consulting authority on doubtful points will thus be developed in English.

Classes of Sentences.

Use. Declarative, interrogative, imperative and exclamatory.

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Form. Simple, complex and compound. In securing freedom and variety of expression and in securing a sentence sense, these distinctions and terms are fundamental and are easily understood if approached properly.

Components of a Sentence.

Subject. Bare, Complete; modifiers—word, phrase, clause.

Predicate. Verb; modifiers—word, phrase, clause.

Complements. Attribute—adjective or noun; object; objective.

Kinds of Modifiers.

Use. Adjective, modify nouns; Adverbial, modify verbs, adjectives and adverbs.

Form. Word; phrase—prepositional, infinitive, participial; clause—its essentials; its connection with the rest of the sentence; its kinds—dependent, independent; its uses—as a modifier of a noun, as a modifier of the predicate, and as a noun—subject, attribute, object, or to complete a preposition.

Parts of Speech.

Noun. Use of the term substantive.

Kinds.

Number and person. To be noted in relation to agreement with pronouns and with verbs in sentences.

Gender.

Case. Attention to predicate nominative and objective.

Function of nouns in sentences.

Pronouns. Personal, relative and interrogative. Especial attention to case forms in usage. Antecedent in its control of the person and number of pronouns. Distinctions in the use of relatives.

Adjectives. Forms of comparison to be emphasized. Distinguish in use from the adverb. Use of articles. Accuracy in the choice of adjectives. Use of the predicate adjective.

Verbs. Form—regular and irregular or strong and weak.

Use. Transitive and intransitive or complete and incomplete.

Tense. Emphasis upon correct tense forms—shall and will, etc.

Voice. Use in cultivating variety in expression.

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Mode. Indicative as distinguished from more emphatic imperative form; the subjunctive in teaching difference in meaning between "if I was" and "if I were" in "contrary to fact" expressions.

Person and Number. Emphasis on agreement of subject and verb.

Defective verbs. In use of ought.

Adverbs. Function—as distinguished from adjectives. Comparison—to secure correct usage of the different forms. Conjunctive adverbs—as distinguished from relative pronouns and conjunctions, in securing strength in sentence structure.

Prepositions. Use. Distinguishing such forms as in and into.

Conjunctions. Kinds—to be noted in reference to securing strength in sentence structure. Attention to punctuation.

Special Verb Forms.

Participles. Attention to avoidance of loose participial construction.

Infinitives. Securing variety of expression. Avoidance of "split" infinitive.

Gerund. Teach in relation to the need for the use of the possessive form of a noun preceding it.

As previously indicated, all of this grammatical study will be for the purpose of rationalizing practice, and to do this, it must necessarily be in vital relationship to practice. Care will be taken in all work to establish good habits of form and to demand high standards in spelling and in the use of arbitrary signs.

HISTORY

In this grade and in the eighth, the work will be devoted to a study of the growth of the American Nation. The work of preceding grades has provided a background for this work and has traced the evolution of the world's most important peoples of the earlier centuries to a point which makes clearly intelligible the political and industrial development which has taken place in America. The year will begin with a review of the period of discovery and early colonization, briefly touched upon by the sixth grade, and will follow the industrial, commercial, social, and political life of the Colonists to the beginnings of the new govern-

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ment under Washington's administration. Economic, geographic and industrial influences, as well as the influences of inheritance from the European allegiance and prejudices of the Colonists, will be carefully considered in their bearings upon political life. Interest in developing forms of government will center in comparisons of the growth of towns and the town meeting in New England and the representative form found in the house of burgesses in Virginia. The Intercolonial wars, now easily appreciated as a continuation of conditions studied earlier in European history, will be taken up, followed by a study of the causes, main events, and consequences of the Revolutionary War. A careful study of the Critical Period will be made, in which the problem of government will be traced through the trial of the Articles of Confederation and into the Constitutional Convention which will be studied constructively. This study of the Constitutional Convention will be based upon the problematic situations which confronted its members and an effort will be made to see these problems as real, to see the possible solutions, and to come to the compromises which finally gave the acceptable form. This will involve an appreciation of the more fundamental elements in Federal Civil Government and in such way as to make the subsequent study of our history a study in "real government" in its evolution. Much of the work on the constitution will be based upon Madison's Journal of the Convention. In all of the preceding work, the industrial and social life of the people will be carefully followed as it influences the growth of political life. The year's work as a whole is a study of struggle for security in pursuing, undisturbed, the common vocations of life, struggles against the natural forces of the virgin environment, against the Indians, against the French, against England, and, in some measure, against each other.

The following list of references is not expected to be used in full but to furnish a good supply of carefully selected material from which supplementary aids may be secured as conditions of time and library equipment permit. Care must be used in requiring that all assigned supplementary work is definitely organized with reference to the topic which it supplements.

Caldwell, A Survey of American History—Ainsworth & Co.

Channing and Hart, American History Leaflets—Lovell & Co.

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- Channing, Students' History of United States—Macmillan, Chicago.
- Coffin, C. C., Boys of 1776—Harper Brothers, New York.
- Coffin, C. C., Old Times in the Colonies—Harpers.
- Cook, J. E., History of Virginia—Houghton, Mifflin & Co., Chicago.
- Eggleston, Edw., Beginners of a Nation—D. Appleton & Co., Chicago.
- Fiske, John, Beginnings of New England; Civil Government of United States; The Critical Period in American History; Dutch and Quaker Colonies; Old Virginia and Her Neighbors; The Discovery of America; War of Independence—all by Houghton, Mifflin & Co.
- Hart, A. B., American History Told by Contemporaries, Vols. I and II. The American Nation, Vols. III., V., VI., VII., VIII.; Source Book in American History—American Nation, Harpers; others, Macmillans.
- Hosmer, Life of Sam Adams—Houghton.
- Lodge, H. C., Life of Alexander Hamilton—Houghton.
- Lodge, H. C., Life of George Washington—Houghton.
- MacDonald, Select Charters—Macmillan.
- Madison, James, Journal of the Constitutional Convention of 1787—Scott, Foresman & Co., Chicago.
- Montgomery, Students' History of United States, Ginn & Co., Chicago.
- Morse, J. T., Thomas Jefferson—Houghton.
- Old South Leaflets—Old South Works, Publishers, Boston.
- Parkman, Francis, Half Century of Conflict; Pioneers of France in the New World; Pontiac's Conspiracy—Little, Brown & Co., Boston.
- Roosevelt, Theodore, Winning of the West—Putnams, New York.
- Sloane, French War and Revolution—Scribners, New York.
- Steele, J. D., Barnes' Popular History of United States—Amer. Bk. Co.
- Thwaites, R. G., The Colonies—Longmans, Green & Co.

GEOGRAPHY AND NATURE STUDY

Asia, Africa, Australia and Islands of the Pacific.

Study first, continents as wholes, noting form, size, topography, drainage, shore lines, wind, rainfall, temperature belts, veg-

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etable and animal life. Characteristics of tundra, desert, mountain, plateau, river valley, and jungle regions. Distribution of forests, of mineral resources, and of population. In each case the controls should be noted. Constant reference in the upper grades to these factors worked out in the preceding grades, tends to build up the right conception of geography and as the pupil passes from one characteristic region to another he begins to recognize the principles which control the life and hence the human activities which prevail; he will, if well directed, soon be able to infer results and condition if a few principles are stated. For example, if the latitude, the position, and adjacent bodies of water and the location of mountains are given, the pupil should be able to infer with considerable accuracy the winds, the moisture, the temperature and life conditions of the region. Good exercises in such thinking are readily made by varying one of the controlling factors, and calling for the consequent.

Regions can be made typical by grouping those having similar controls; hence, in Asia, the plateaus of Asia Minor, Arabia, Iran, Deccan, Tibet, Manchuria and Mongolia should be studied in sequence, each succeeding one receiving just the attention necessary to make its characteristic differences in physiography, and life apparent. In like manner the tundra regions, the great plains and river lowlands should be studied in sequence.

Many free-hand memory sketches should be required, and much chalk modeling done. The simpler parts should be modeled in sand, and a simple model of the continent made in salt and flour or some substitute. A more careful study should be made of those areas and centers that have commercial relations, direct or indirect with the United States. Commercial routes should be plotted on outline maps. The aim throughout should be to secure ideas and establish principles. Location should be incidental to the securing of thought. Pictures should be used freely, and reliable supplementary books should be read by the children. Each child should have a copy of Carpenter's "Asia". Exercises should be given in the interpretation of Longman's Atlas. The following are suggested as typical questions of study:—

1. What is the January temperature of Calcutta? The July temperature?
2. In what direction do the winds blow in India in January? In July?

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3. What season then do you think will bring the greatest rainfall?
4. Compare the annual rainfall with that of southeastern United States.
5. Do you think the region about Calcutta is forested? Compare with Holland; with Illinois; with Eastern China; with Siberia.

All the work in these continents will constantly call for comparison with similar features in our own land, and will be viewed in the light of its effect upon our life conditions.

References.

Dodge—Advanced Geography—Rand.

Carpenter—Geographical Reader, Asia, Africa, Australia, Oceanica, A. B. C.

Bard—Chinese Life in Town and Country. Putnam

Aryton—Child Life in Japan. Heath.

Campbell—Present Day Japan. Lippincott.

Tarr-McMurry—Advanced Geography. Macmillan.

Reclus—The Earth and its Inhabitants. Asia, Africa, Oceanica. Appleton.

Keane—Stanford's Asia, Africa, Australia. Stanford.

Wallace—Malay Archipelago.

Kellogg—Australia and the Islands of the Sea. Silver, Burdette.

Hornaday—Two years in the Jungle. Scribner.

Bishop—Unbeaten Tracks in Japan. Putman.

Lefcadio Hearn—Glimpses of Unfamiliar Japan. Houghton.

Smith—Village Life in China. Revell.

Hamilton—Korea. Scribners.

NATURE STUDY

Bird studies will continue, increasing the list of known birds and learning more of bird life. A study of the recent bird census of Illinois will be made. The problem of migration of birds will be taken up, including such questions as motives in flying, how birds find their way, length of flights, food problems on the journeys, crossing large bodies of water, breeding grounds etc. Other studies will include protective coloration, methods of defense, functions of songs and colors, bird instincts. As occasion offers, studies will be made on any form of animal life attracting

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attention, noting especially those elements that relate to adaptations of structure to use, and economic considerations.

Physical and chemical facts will be taken up and such experiments performed as are needed in cooking and other phases of manual arts work.

Meteorology will continue to form a part of the work through observations about us and through applications of principles in geography studies. Weather forecasting will receive attention. Study of constellations.

Garden work will here be directed toward the solution of problems in the principles of plant development. Experiments with seedlings, as the peach, apple, blackberry, strawberry, raspberry, etc., such as are suggested by Hodge's Nature Study and Life, will be made. Seeds from far north and from far south, all of one variety, will be planted to test the effect of environment upon plant life. Controlled problems in plant ecology will be made, and the inter-influences noted and recorded. Children will be led to an interest in the literature of biological science. A study of pruning and care of trees and shrubs as applied to local fruits will be made. Interest in wild flowers will continue. Some forms of moulds, mildews, apple scabs, and other flowerless plant growths will be studied.

MATHEMATICS

The primary idea in the number work of this grade is to enlarge the pupil's appreciation of number and its processes. Especial emphasis is put on the development of this power to penetrate conditions and to see the vital elements in any problem. The pupil incidentally acquires knowledge of some of the great industries and institutions of this country by considering actual facts and conditions. The material is local, state and national. Many problems come from the manual arts work and other school subjects.

New Number Theory.

Counting to billions. Most work, however, in field below one million. Multiplication and division. General method of division and partition of fractions. Decimals to ten-thousandths. Many approximations will be made in the work in decimals, usually limiting the use to three decimal places. Material suggestive of typical sources for problems:

Measurement of common solids as suggested by surroundings.

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- Building streets, sidewalks, etc. Do good roads and streets pay?
- Potato industry. Fruit industries—localities, averages, totals, shipping methods. State and local conditions.
- Cattle and stock yards. Packing houses and meats. Cotton and wool, clothing. Does it pay to own a cow? Making butter. Does it pay to own chickens?
- Running a store, grocery, dry-goods, bakery, etc. A study of fundamental conditions regarding methods, expense, profits, income, etc.
- Local factory enterprises. Partial payments, with two or three payments in reasonable sums. Accounts.
- Taxation—government, state, county, city, revenues and expenditures. Methods and rates.
- The mercantile business. Some idea of the enormous business of department stores. Discounts. Banking—notes, interest, bank discount, checks, drafts, etc.
- A town's water system—piping, sizes, tops, etc.; pumping; Enormous cost of poor water.
- Area and population statistics in comparisons in geography. Graphs.
- Milk supply. Cost of sickness from infected milk and water, based on physician's and nurses' bills.
- Transferring money—methods, cost, etc.
- Publishing a paper or magazine—expenses, returns, advertising, etc. Probably estimating but bringing out the large items to be considered.
- Installment investments—books, pianos, society memberships, advance subscriptions, etc.
- Electric and gas lighting. Town lights. Eyes. For cost of lights, see article in Ladies' Home Journal, Feb., 1907.
- Education. National, state, country, town, statistics. Cost per capita. Value—comparison of financial receipts of educated and uneducated. Does it pay financially to send a boy or girl to college?
- Cost of a trip abroad—Baedekers, hotels, railroads, steamships, etc.
- Wastage by wars—life, money, business. Russia-Japan war.

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See the list of texts given at the close of the sixth grade outline which furnish suggestive material for work similar to the foregoing.

MANUAL ARTS

Problems arising in school subjects and in real life. More attention to the rationalizing of principles and to the broader social relationships.

Cardboard Modeling and Bookmaking: Waste basket, work box, portfolio, note books with covers, booklets. Study of commercial book binding.

Sewing: Aprons, drafting of patterns for underclothing and making of the same, traveling case with feather stitch. Custom made clothing. Sweat shops. Dress making as a business. Styles appropriate to seasons, occasion and persons. Color harmony in dress.

Woodworking: Window box, screen, modeling tools, bird house, clay board, book stand, simple pieces of furniture following the Colonial designs as met in history. Models of block house, canoe, flat boat, trading post, communal house.

Metal Working: Such work in simple repairing and furnishing of irons for other pieces of work as can be easily provided by simple forge work. Study of smelting iron and processes of treatment in making various grades of steel.

Printing: General work for the school as demands arise.

Drawing: Study of action, form, proportion, harmony, space relations, color, principles of perspective, composition, rhythm. Printing and illuminating with special reference to initial letters, tail pieces and chapter headings. Designs for projects in other hand work. A calendar of the year through seasonal motives and colorings.

Modeling: Tiles for window box and for mosaics for illustrative designs. Statuettes and other forms to illustrate subjects from history and literature.

Picture Study and Study of Other Masterpieces of Hand Work. Representative pieces illustrative of excellence in every field of hand work as in preceding grades. An especial study of Japanese art. Among the pictures of this year, used to illustrate principles, to make the acquaintance of their painters, and to cultivate taste and love of pictures, will be chosen

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copies from Burne-Jones, Rembrant, Gainsborough, Corregio, Stuart, Adam, Duprey, Reynolds, Boughton, Hogarth and Turner. Many selections will be made as motives arise for them in history, literature, or other subjects.

Cooking: Classification of foods;—carbohydrates; fats; proteids. Study of relative food values of meats, vegetables, eggs, milk, cereals, etc., through tests for food principles. Effect of heat on various types of foods. **Housekeeping:** Sanitation in ventilation, cooking, sweeping, care of refrigerator, sinks dishes, cooking utensils, use of disinfectants. Care of pictures, furniture, clothing. **Laundrying.**

MUSIC

Sight Reading. Songs and exercises in Book III., Modern Music Series. Smith—Silver, Burdett & Co., Chicago. For supplementary material, there will be used, The Silver Song Series Number 7, Silver, Burdett; Selected numbers of the Coda,—Ginn & Co., Chicago; The fourth and fifth books of the Educational Music Course,—Ginn & Co., and the fifth book of the New Harmonic Series, Ripley and Tapper,—Amer. Bk. Co.

Art Songs. Studied to cultivate appreciation and taste.

Scale Drills. Use major, minor and chromatic scales.

Scale formation. Major and minor scales; whole and half steps.

Original melody and song construction.

Program Music. Programs and concerts made up of regular class work to include art songs and to illustrate the particular types of music developed in the study of the history of music. Occasional author programs will be arranged, including both vocal and instrumental pieces.

History of Music. Stories of Handel, Haydn, Bach, Beethoven, Schubert, Schuman, Mendelssohn, Wagner, Verdi, Grieg and Liszt. Programs as indicated above to illustrate the music of each composer. Development of musical organizations and societies in recent times. Place of the concert, opera, oratorio and other forms of musical festivals in present day life. Recent developments in musical instruments.

Orchestral practice for those having musical instruments.

PHYSICAL TRAINING

In the seventh and eighth grades are found conditions of

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growth which need much care and great variety of treatment. It is a period of rapid growth and development with increased heart action and many changes at the oncoming and development of adolescence. Much attention must be given to individual needs. Caution is needed to prevent overwork. Close attention must also be given to the formation of good habits of posture and carriage. The aim of the work is to provide careful exercises to guard this development and to cultivate mental attitudes favorable to cooperative and competitive activities in the right spirit; to secure more exact and proficient self control and activity.

In much of the work the seventh and eight grades will be taken together, the boys forming one section, the girls the other when division is made.

Outline for Boys,

General Exercises: Military tactics; strong resistive work with relaxing work; jumping and floor exercise; use of clubs, bells and wands; beginning tumbling and mat exercises; horse, ladder and ring work; parallel bar and seat exercises. Games: Basket ball; captain ball; scrimmage ball; contests of strength and skill; Races—skin the snake: wheelbarrow race, outdoor athletics.

Outline for girls.

General Exercises: Military tactics; figure marching: fancy steps and folk dances; advanced work with clubs, bells, wands and balls; ladder and ring exercises: marching calisthenics; combination drills: outdoor athletics.

Games: Basket ball; captain ball: fox and hounds; threading the needle; ball and hoop; relay races.

For further material on Gymnastics and games, see the list of sources in the appendix at the end of this catalog.

Hygiene: Principles of physical training; foods; digestion; circulation; care of the body after exercise.

GRADE VIII.

ENGLISH

Literature and Reading. The plan of work fully described in the outline for grade V. is here employed also. See fifth grade statement.

Selections suggested for class study:

Burns--Cotter's Saturday Night.



THE DRAMATIC CLUB, 1907—"SHE STOOPS TO CONQUER."



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Dickens—Christmas Carol.

Hawthorne—The Great Stone Face.

Holmes—Old Ironsides: The Spectre Pig; The Last Leaf;
The Boys.

Longfellow—Tales of a Wayside Inn—selections.

Lowell—Bigelow Papers—selections.

Scott—The Lady of the Lake.

Shakespeare—Julius Caesar; Midsummer Nights' Dream.

Van Dyke—The Other Wise Man.

Webster—Bunker Hill Orations; Webster and Hayne De-
bates.

Whittier—Barbara Fritchie; The Angel of Buena Vista.

Whitman—O Captain, My Captain.

List of books for individual reading.

Churchill, The Crisis—Macmillan.

Connor, The Sky Pilot—Revell.

Cooper, Last of the Mohicans; The Pathfinder; The Pilot;
The Prairie—All by Rand, McNally & Co.

Dana, Two Years Before the Mast—Houghton.

Darwin, What Mr. Darwin Saw in His Voyage around the
World—Appleton.

Dickens, David Copperfield; Little Dorrit; Old Curiosity
Shop—All by Nelson.

Eggleston, The Graysons—Century Co.

Eliot, Silas Marner—Heath.

Francillon, Gods and Heroes—Ginn & Co.

Hapgood, Life of Lincoln—Macmillan.

Jackson, Ramona—Little, Brown.

Jerome, Three Men in a Boat—Rand.

Page, Red Rock—Scribners.

Porter, Scottish Chiefs—Rand.

Porter, Thaddeus of Warsaw—Rand.

Riis, Theodore Roosevelt the Citizen—Macmillan.

Riis, The Making of an American—Macmillan.

Scott, Kenilworth; Quentin Durward; Rob Roy—All by
Nelson.

Smith, Colonel Carter of Cartersville—Houghton.

Smith, Tom Grogan—Houghton.

Trowbridge, Cudjo's Cave—Lee & Shepard.

Washington, Up from Slavery—Doubleday, Page & Co.

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Language and Grammar. The work in this grade will be a continuation of that in the seventh, both in matter and method. See the seventh grade outline. In the last quarter of this year, definite effort will be given to an organization of the data of grammar thus far presented into a classified whole, using as a basis the text, *Modern English, Book II*, by Emerson and Bender, published by Macmillan.

HISTORY

The development of our national life, beginning with Washington's administration, down to the present time. The method of study will involve the solution of many of the problematic situations which have arisen in our history, developing in pupils the ability to marshal the lessons taught by the history of the more remote past in interpreting probable solutions for problems as they come in our own time. One dominant aim in the work will be to try to show how the present may be understood and interpreted in terms of the past and that the chief value of the study of history is in its power to aid us in shaping wisely our conduct in the present. The influences of industrial and commercial conditions and of geographical factors in determining much of our political life and history will receive due emphasis. Account will be taken of the important events of the day and an effort made to relate them to the general movements in the history of the present time. Note will be taken of our territorial and commercial expansion and of the free interpretation of our Constitution to meet unforeseen conditions, and of all of this in relation to the fact that we are now beginning to realize the problems of intensive development as greater than those of this past century of extensive growth. The closing two months of the year will be devoted to a brief review of Federal Civil Government with a study of the more important features of local Civil Government.

The statement referring to the list of books for seventh grade supplementary sources applies also to the following list. All those references in the seventh grade list which are for the whole period of American history may be regarded as appropriate for this grade, also.

Adams, Henry, *History of the United States*—Scribners, New York.

Burgess, J. W., *Civil War and the Constitution; The Middle*

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- Period; Reconstruction and the Constitution—All by Scribners.
- Caldwell, American Territorial Development—Ainsworth & Co.
- Coffin, C. C., Boys of 1861; Days and Nights on the Battle Field; Estis Pub. Co., Boston; Drum Beat of the Nation—Harpers.
- Dodge, Bird's Eye View of the Civil War—Houghton, Mifflin & Co.
- Hart, A. B., American History Told by Contemporaries, Vols. III and IV.—Macmillan. Formation of the Union—Longmans, Green & Co.; The American Nation. Vols. XIV., XV., XVII., XVIII.—Harpers.
- Johnston, American Politics—Henry Holt & Co., Chicago.
- Lodge, H. C., Daniel Webster—Houghton, Mifflin & Co.
- Lathrop; L. K., William H. Seward—Houghton.
- McCall, S. W., Thaddeus Stevens—Houghton.
- Macdonald, Select Documents in American History—Macmillan.
- Morse, J. T., John Quincy Adams—Houghton.
- Morse, J. T., Abraham Lincoln—Houghton.
- Rhodes, History of United States Since the Compromise of 1850, six volumes—Macmillan.
- Schouler, History of the United States, six volumes—Dodd, Mead & Co.
- Stanwood, History of the Presidency—Houghton, Mifflin & Co.
- Sumner, W. G., Andrew Jackson—Houghton.
- Von Holst, John C. Calhoun—Houghton.
- Wilson, Woodrow, Division and Reunion—Longmans, Green & Co.

When available, periodical literature, by the aid of Pool's Index and the Reader's Guide, will be used. Standard current magazines and reviews will be used extensively for current history.

GEOGRAPHY AND NATURE STUDY

The United States—An intensive study of the Industrial and Commercial Life on a Regional Basis with Constant Reference to Regions with Similar Life in Other Countries.

Heretofore in the study of our own continent the method of study has been largely from consequence to cause. Children

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have now reached a stage of development and maturity which makes possible an organization of their knowledge into definite principles. No better means of developing and applying concretely these principles can be devised than by combining regional geography with the industrial and commercial life dependent upon it.

As a basis of comparison and as a means of developing the method of study, an intensive study of a typical local industry is made. Because of its local importance we have chosen the Clay Industry of Macomb.

A. The Macomb Potteries.

1. Natural Resources—determining factors—Geographical Controls.
 - a. Clay—Location—Method of Obtaining—Composition—Its Geological Story—Kinds—Supply Available.
 - b. Coal—Supply adjacent to Macomb.
 - c. Sand—Supply adjacent to Macomb.
2. Making Pottery.
 - a. Preparing Clay—Procuring—washing—slushing—pressing—pugging—grinding.
 - b. Molding—Old and new processes compared.
 - d. Slipping. e. Burning.
3. Disposing of product—three grades. Firsts—Seconds—Chuck.
 - a. Macomb markets b. Transportation. c. Account of business in Macomb.
4. The Pottery Trust.
 - a. Its effect upon Macomb industry.

B. Allied Industries in Macomb.

1. The Sewerpipe and Tile Industries.
Process of manufacture and relative value of business compared with the potteries.
2. The Brick Factory.
Process of manufacture and relative value of business, compared with those of the potteries and sewerpipe factories.

C. The Clay Industry in General; a comparative study.

1. Historic study of the industry.
 - a. The Grandmother Kaolin Myth. b. Early methods of

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- making pottery, bricks, tile, etc. c. The American Indian pottery.
- d. The potter's wheel. e. Chinese pottery. f. Japanese pottery. g. Indian pottery. h. Egyptian pottery. i. Grecian pottery. j. Roman pottery.
- k. Italian pottery—Majolica. (Spanish and Mexican pottery.)
- l. French—Life of Bernard Palissy—Haviland.
- m. German—Dresden. n. Dutch—Royal Copenhagen, Delft.
- o. English—Staffordshire ware, Life of Wedgewood, Basaltes—Lustres.
- p. American—Rookwood—Grueby—Newcomb—Teco—Louwelsa—Losanti—Dedham—Van Briggles—Trenton, N. J. Tableware.
2. Correlation with Literature.
- a. Selections from the Bible. b. Longfellow's *Keramos*.
c. VanDyke's *A Handful of Clay*. d. Omar—*Rubyiat*.

References.

1. Sturgis *American Pottery*—Scribner, Vol. 32, page 637, Vol. 33, p. 381.
2. Barber—*The Pottery and Porcelain of the United States*—Putnams.
3. Barber—*Anglo-American Pottery*—Patterson and White.
4. Frantz, Henry—*French Pottery and Porcelain*—Scribner
5. Moore—*The Old China Book*—Stokes.
6. Walters—*History of Ancient Potteries*—Vols. I and II. Scribners.
7. Barber—*Tin Enameled Pottery*. Doubleday Page and Co.
8. "Grandmother Kaolin", in Howliston—*Cat Tails and Other Tales*—A. Flanagan.
9. Longfellow—*Keramos*.
10. "A Handful of Clay", in Van Dyke—*The Blue Flower*—Scribners.
11. The Bible.
12. Omar, *Rubyiat*—Little, Brown and Co. or Houghton.

Following the study of one industry as a type, will come an intensive study of the industries of the United States, in their regional settings.

II. The New England Group.

This group is a unit in itself, containing types of some of the

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important physiographic to be features met in studying the various regions, the coastal plain, the "fall line", the plateau and the mountain. A careful study of this unit will serve for comparison in the rest of the work.

A. Physiography-Geographic Controls.

1. Geological history-effects of glaciation, vulcanism, diastrophism, weathering, erosion, denudation.
2. Surface-worn down plateau-the low plains of glacial origin-rivers-Merrimac as type furnishing water power-drumlins, irregular coast line-soils-distribution of upland and lowland.
3. Climate.
4. Resources--marbles--granite--slate--limestone--iron--forests--fish.

B. Development of Industrial Life.

1. Influence of physiography upon early history--harbor climate and soil in influence upon agriculture--fishing and its resultant influence upon lumbering, ship-building and commerce.
2. Early Industries--fishing--lumbering--iron manufacture--factories and mills for cotton and woolen goods--leather products--rum manufacture--foreign slave trade.
3. Changes in Industries--decline of fishing--decline of agricultural industries on farms--market gardening--cotton manufacturing shifting to southern states--summer resort--new attitude toward forests--dairying.
4. Cities--Boston, seaport, center traffic--Lowell, spinning--study great factory system--Gloucester, fishing--Fall River, combines water power and tidal highway--Bangor, lumbering--life in a lumber camp--Rutland, quarrying--study the quarrying industry--Lynn, tanning--St. Albans--dairying.

C. Commercial Life.

1. Land and water routes furnishing commercial possibilities.
2. Effect of topography upon western trade.

III. New York State.

A. Physiography-Geographic controls.

1. Geological history--early drainage across Pennsyl-

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vania--making the Mohawk Valley, effects of glaciation, outlet for Great Lakes—the Hudson valley.

2. Surface—Mohawk valley—Hudson valley Lake region in southwestern New York—Catskill Mountains—Niagara escarpment—New York Harbor—distribution of highlands and lowland—drainage—soils.
 3. Climate.
 4. Resources—forests of Adirondack Highland and Alleghany Plateau—marble—building stone—cement—oil—salt—fish—soils.
 5. Influence of topography of New York upon the Revolution.
- B. Development of Industrial Life.
1. Early fur trade with the Iroquois. 2. Dutch Manorial life.
 3. Modern industries—market gardening—grape raising—study of vineyards of Cattaraugus and Chautauqua Counties—dairying—lumbering—quarrying—fishing—manufacturing—commerce.
 4. Cities—New York, study of its development as our greatest trade center; influence of harbor, of Erie Canal; its rivalry with Boston: its possibility of future growth.
 5. Significance of names in their historic relationships.
- C. Commercial Life—advantage of location upon commerce—elements which may alter this advantage—volume of world's business—Ellis Island—leading commercial routes centering here.
- IV. Atlantic Coastal Plain.
- A. Physiography—Geographic Controls.
1. Geological history—oscillations of sea shore—work of streams—diastrophic islands.
Surface—few hills—slightly terraced by bluffs—extensive marshes—rich soil—irregular coast line—lines of drainage—drowned valleys—study of Chesapeake Bay—Harbors.
 3. Climate—variation in summer and winter, north and south.
 4. Resources—fish—soil—forests.
- B. Development of Industrial Life.
1. Influence of physiography upon early history—tobacco

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plantations in Virginia—lack of good harbors a cause of slow development of North Carolina—climate and early culture of cotton and rice, developing overseer system of slavery in South Carolina—slave trade.

2. Industries.
 - a. Farming and trucking in New Jersey. Fruit raising in Delaware.
 - c. Oyster fishing in Chesapeake Bay. d. Tobacco raising in Virginia.
 - e. Rice in South Carolina. f. Forestry—producing lumber, resin, etc. in North Carolina.
3. Cities—Atlantic City, N. J.—Norfolk, Va.—Wilmington, N. C. Charleston, S. C.—Savannah, Ga.
- C. Commerce—Coastwise commerce—Baltimore's growing commerce.

V. Piedmont Region—"Fall Line".

- A. Physiography—Geographic Controls.
 1. Geographical history—reduction to penepains—irregular elevation to plateaus—tilting eastward—carving of valleys.
 2. Surface—largely plains—some hills—"fall line"—soil—drainage.
 3. Climate.
 4. Resources—lumber—quartz—waterpower.
- B. Development of Industrial Life.
 1. Influence of the "fall line" upon location of Indian villages, colonial towns, and modern cities.
 2. Cities—Trenton and Patterson, N. J.—Baltimore, Md.—Philadelphia, Penn.—Washington D. C.—Richmond and Petersburg, Va.—Raleigh, N. C.—Columbia, S. C.—Augusta and Macon, Ga.—Montgomery, Ala.
A study of Trenton as a type closely related to our local clay industry.

VI. The Barriers.

- A. Appalachian Highland—"Old Land Belt"—Northern Pennsylvania—Virginia—Southern North Carolina—South Carolina—Tennessee—Kentucky.
 1. Its Physiography.
 - a. Geological history—diastrophism, tilting toward

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Atlantic and toward Ohio, folding in two regions—erosions.

- b. Surface—ranges cut by the water gaps—intervening valleys.
 - c. Influence upon early history of United States.
2. Industries—agriculture in the valleys—mountains left in forest.

B. Great Valley—Appalachian Valley.

In New York, the Wallkill Valley. In Pennsylvania, toward the Maryland line, Cumberland Valley. In Virginia, Shenandoah Valley. An intensive study of the Shenandoah valley.

1. Physiography.
 - a. Geological history—due to etching out of shales and limestones.
 - b. Soils rich—surface admits of many railroads—river courses.
 - c. Boundaries.
2. Influence on history.
 - a. In immigration west. b. In Civil War. c. Roads through to the west.
3. Industries—greatly varied.
4. Cities—Harrisburg, Pa.—Chattanooga and Knoxville Tenn.

Influence of topography of Chattanooga on Civil War.

C. Alleghany and Cumberland Plateaus.

1. Physiography of two compared.
 - a. Difference in climate and drainage of the two.
 - b. Geological history—tilting—erosion.
 - c. Climate.
 - d. Resources—coal, iron, oil, lumber.
2. Development of Industrial Life.
 - a. Early migration to head waters of Ohio.
 - b. Study of Coal Industry—lignite—cannel—anthracite—bituminous—area of field—supply of coal—formation of coal—methods of mining—means of transportation—life of miners—comparison with other coal fields of the United States and in other countries.

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- c. Study of Iron Industry—deposits of iron—geological story—mining—smelting—making cast iron—steel, various processes—life of the workers in iron—making a cast—study of Macomb foundry as a type—comparison with other iron deposits of the world.
Study of petroleum industry through different stages of refinement—Standard Oil Company—Comparison with world supplies.
- e. Natural gas. f. Coke
- g. Cities—Pittsburg, Pa.—Wheeling W. Va.—Cleveland O. in relation to Pittsburg and iron mines of Superior region—Scranton, Pa. Wilkesbarre, Pa. Nashville, Tenn.
- 3. Commerce—Problem of transporting coal, iron, oil and gas to markets of the world—importance of iron industry to all other industries, railroads, buildings, ships, etc.

VII. The Great Lake System and Lake Plains.

A. Physiography.

- 1. The geological history of the lakes—influence of glaciers—their growth—drainage through the Mississippi, Mohawk, Ontario and Georgian Bay and through the St. Lawrence.
- 2. The geological history of the lake plains— influence of glaciers—growth of land—growth of divide giving rise to the need of portages—more recent diastrophism and its effect upon Niagara Falls—Origin of many lakes.
- 3. Surface—lake region—sand dunes— treeless prairies—soils—drainage.
- 4. Climate—path of storm centers—exposure to north— influence of lakes.
- 5. Resources—copper—iron—clay beds—coal—water power—fertile soil—summer resort opportunities—forests to the north.

B. Development of Industrial Life.

- 1. Influence of physiography upon early history.
 - a. Lakes a gateway to the interior for the French fur trade—use of portages.
 - b. Ohio in its influence upon emigration.

EIGHTH GRADE

- c. George Rogers Clarke's influence.
 - d. Significance of names.
2. Early industries—fur trade—farming.
 3. Present industrial life—copper mines of Superior—fruit raising in Michigan—Lumbering in Michigan and Wisconsin—wheat, corn and cattle in Illinois—factories of Illinois—packinghouse industry of Chicago—coal industry of Illinois. Niagara water power industries—steel industry of Chicago—coal industry of Illinois.
 4. Cities—Chicago, study of its growth as a trade center. Milwaukee, Wis., brewery—Detroit, Mich.,—Duluth, Minn., grain market—Cleveland, Ohio.—Buffalo, N. Y. Sault Ste. Marie, Mich.—Grand Rapids, Mich.—Minneapolis, Minn.
- C. Commercial Life—Influence of Erie Canal upon this region—possibilities of Ontario Canal—Chicago Drainage Canal—volume of world's business passing through Detroit—locks of the "Soo"—influence of railroads.

VIII. The Gulf Plains.

- A. Physiography.
1. Geological history—condition in glacial age—growth by erosion—coral influence in Florida.
 2. Surface—soil—drainage—swamp region—shoreline features.
 3. Climate. Excessive rainfall and heat.
 4. Resources—woods, cypress, etc—coal—iron.
- B. Industrial Life.
1. Influence of physiography upon early history - slavery.
 2. Early industries—influence of slavery upon labor problems.
 3. Modern industrial tendencies—the Negro problem in industrial life—recent movement in cotton manufacture—cotton industry—sugar cane industry—rice—fruit raising—lumbering.
 4. Cities—New Orleans as a trade center—compared with Chicago and New York—Key West, its possibilities—Birmingham, Ala. cotton mills—Galveston Texas.
- C. Commercial Life—influence of Mississippi upon growth

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of New Orleans—influence of Panama Canal upon New Orleans and Key West—the “Black Belt”.

IX. The Great Plains.

A. Physiography.

1. The Mississippi Valley.

- a. Geological history—growth by erosion—degradation—glaciation.
- b. Surface—soils—drainage.
- c. Climate—meteorological storm belts.
- d. Resources.
- e. Industrial life—agricultural, corn, fruit, wheat, alfalfa, oats—stock raising—coal mining.
- f. Cities—St. Louis, Mo.

2. Ozark Plateau.

- a. Geological history—faulting—folding—age.
- b. Surface.
- c. Resources—iron—zinc—lumber.
- d. Industrial life—mining—lumbering—fruit growing.

3. The Plateau Region—“Where little rain falls.”

- a. Geological history—sea floor—diastrophism—erosion.
- b. Surface soils, drainage.
 - a.—Black Hills. b.—Bad Lands. c.—Platte Plateaus. d.—Arkansas Plateaus. e.—Red River Valley. f.—Llano Estacado.
- c. Climate—rainfall, influence of cultivation—winds—storms.
- d. Resources of each of the regions.
- e. Industrial life.
 - a.—Early attempts and failure. b.—Adaptation of products to soil and climate. c.—The problem of irrigation—volume of rainfall in proportion to arid lands—regulation of water supply—increased valuation of land—possibilities of future development. d.—The cattle ranch. e.—Trails and railroads.
- f. Cities—Kansas City, Mo.—Omaha, Neb.—Cheyenne, Wyo.—Denver, Col.—Oklahoma City, Ok.

X. The Rocky Mountains.

A. Physiography—Geographic Controls.

EIGHTH GRADE

1. Geological history, including formation of mineral deposits—vulcanism—diastrophism—degradation.
2. Surface—soil—drainage.
 - a. Stony mountains—drained by Missouri, Snake and Columbia—study of the Yellowstone National Park.
 - b. The Park Mountains, southern Wyoming, central Colorado, northern New Mexico—study of Parks, especially the Garden of the Gods—Pike's Peak.
3. Climate—influence of heights on climate and vegetation—rainfall.
4. Resources—gold, silver, copper.

B. Industrial Life.

1. Gold-mining—hydraulic, placer mining—a study of this as an industry in its historic relations. 2. Silver mining. 3. Copper mining.
4. Sheep raising—life as a sheep herder.
5. Irrigation as connected with agriculture.
6. Cities—Butte and Helena, Mont.—Laramie, Wyo.—Leadville and Cripple Creek, Colo.

C. Commercial Life.—problems of transportation—railroads.

XI. Columbia Plateau and similar regions in Alaska.

A. Physiography—Geographic Controls.

1. Geological history—old sea bed—diastrophism—vulcanism—lava flows—erosion.
2. Surface—drainage—soils. 3. Climate—rainfall.
4. Resources—gold—silver—soils.

B. Industrial Life.

1. Mining. 2. Irrigation projects. 3. Herding. 4. Agriculture.

XII. Colorado Plateaus.

A. Physiography—Geographic Controls.

1. Geological history—sea floor—irregular diastrophism—forming lake basins—erosion.
2. Surface—Study of Grand Canyon—drainage.
3. Climate. 4. Resources.

B. Industrial Life. Limited irrigation—type of inhabitants—influence of climate upon early inhabitants—life of cliff dwellers—health resorts.

XIII. Great Basin.

A. Physiography—Geographic Controls.

EIGHTH GRADE

1. Geological history—vulcanism—diastrophism—faults—history of Salt Lake.
 2. Surface—study of Salt Lake region—block mountains—lakes, permanent and extinct.
 3. Climate—arid region, reasons. 4. Cities—Salt Lake City.
- B. Industrial Life.
1. Irrigation—the Mormon movement.
 2. Experiment of the Government in date palm.
 3. San Carlos dam.
- XIV. Pacific Slope, inclusive of Alaska.
- A. Physiography—Geographic Controls.
1. Geological history—age—diastrophism—vulcanism—faults—erosions.
 2. Surface—drainage—soils—shore line, contrasted with Atlantic—study of San Francisco Bay—the Yosemite Valley—Puget Sound—extinct volcanoes—study of Mt. Shasta—ranges.
 3. Climate—summer and winter—relation to winds—distribution of rainfall.
 4. Resources—big trees—gold—silver—fruits—fish—soils.
- B. Industrial Life,
1. Influence of physiography upon history—early coast explorers—nearness to Spanish influence through Mexico—overland routes—the discovery of gold.
 2. Industries—agricultural areas—influence of irrigation—wheat, oranges, figs—varied fruit possibilities of northern sections—fishing, salmon, oysters, halibut, seal—mining—lumbering—ostrich farming.
 3. Cities—San Francisco, Cal.,—Seattle, Wash.,—Portland, Ore.,—Los Angeles, Cal.,—Spokane, Wash.
- C. Commercial Life. Commercial advantage of location—
influence of Panama Canal—labor problems through
aliens.
- XV. Summary.
1. The railroad systems of the United States. 2. Interstate commerce.
 3. Steamship connection with foreign countries.
 4. Merchant Marine. 5. Ship Subsidy. 6. Our Consular Service.

EIGHTH GRADE

7. The work of the Agricultural Department.
8. Forest Reserves. 9. The weather Bureau.
10. The work of the Department of Commerce and Industries.
11. The stages of industrial life.
12. Future growth through intensive development.
13. Interdependence and social relationships through the varied industries of our country.

References.

A. List for use of children.

1. Dodge's Advanced Geography. Rand, McNally & Co.
2. Shaler—Story of our Continent. Ginn & Co.
3. Brigham—Geographic Influence in American History. Ginn & Co.
4. Russell—Glaciers in North America. Ginn & Co.
5. McMurry—Type Studies in Geography. Macmillan.
6. Adams—Commercial Geography. Appleton.
7. Trotter—Commercial Geography. Macmillan.
8. Shaler—First Book in Geology. Heath.
9. Tarr and McMurry—Complete Geography. Macmillan.
10. Rocheleau—Great American Industries. Books. I, II and III. Flanagan.
11. Lane—Industries of Today. Ginn.
12. Heilprin—The Earth and its Story. Silver, Burdette.
13. Fairbanks—Rocks and Minerals. Ed. Pub. Co.
14. Lyde—Man and his Work; Man and his Markets. Adam and Charles Black.
15. Roth—First Book of Forestry. Ginn.
16. Chamberlain—How We Are Clothed. Macmillan. How We Are Fed. Macmillan.
17. Chase and Clow—Stories of Industries, Vol. I and II. Educational Pub. Co.
18. Lock—Spon's Encyclopedia of Industrial Arts, Vol. I, II and III. Spon and Chamberlain.
19. Cochrane—Romance of Industry and Invention. Chambers.
20. Hale—Stories of Invention—Little, Brown & Co.
21. Pinchot—A Primer of Forestry, Vols. I and II. Gov. Print. Office.
22. Harrington—About the Weather. Appleton.
23. Muir—The Mountains of California. The Century Co.

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24. Wilkinson—The Story of the Cotton Plant. Appleton.
25. Gifford—Practical Forestry. Appleton.
26. Martin—Home Life on an Ostrich Farm. Appleton.

B. List for the use of the teacher.

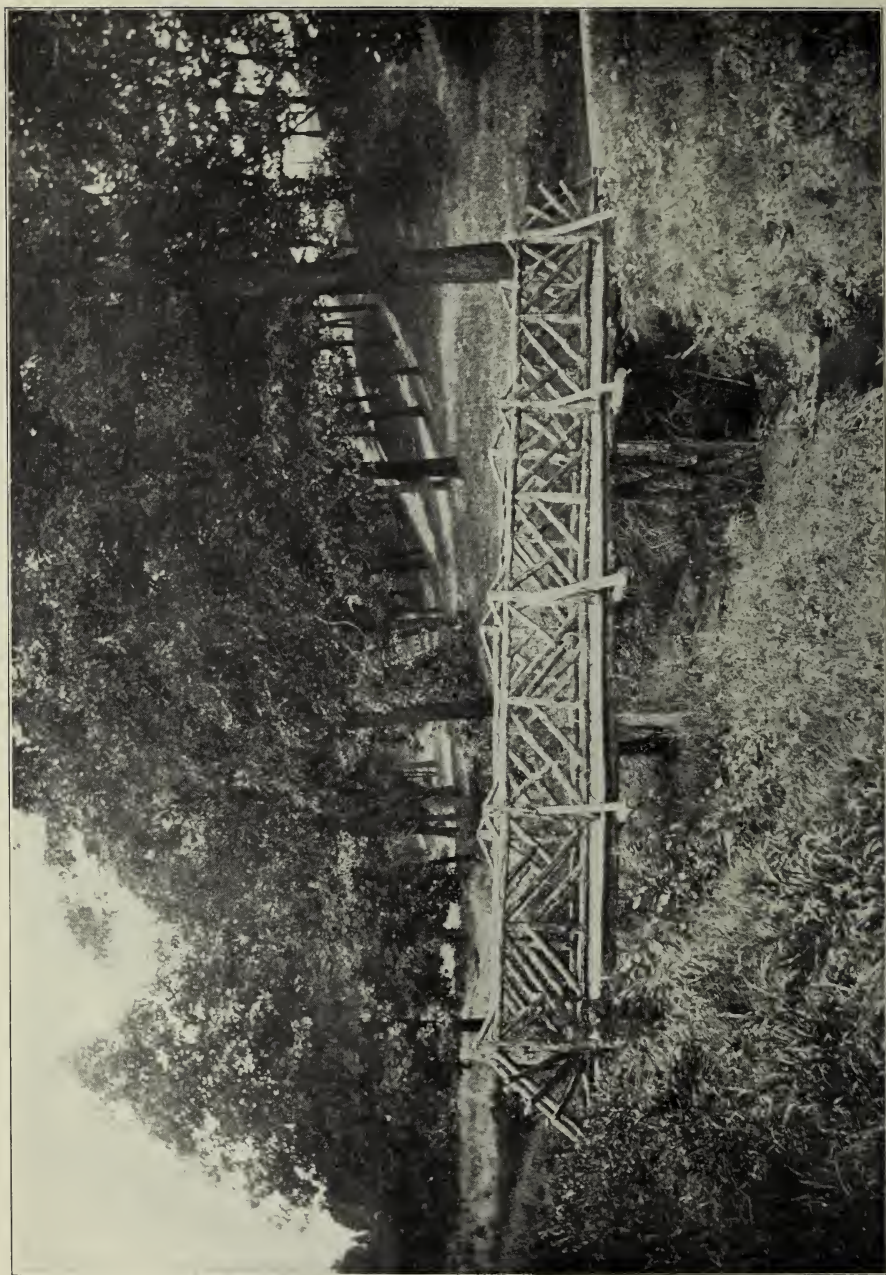
1. Monographs—The Physiography of the United States. A. B. C.
2. Semple—American History and its Geographic Conditions. Houghton.
3. Shaler—Nature and Man in America. Scribners.
4. Bonney—Ice-Work, Present and Past. Appleton.
5. Wright—Industrial Evolution of the United States. Scribners.
6. Mead—Irrigation Institutions. Macmillan.
7. Bailey—Cyclopedia of American Agriculture. Macmillan.
8. Hunt—The Cereals of America. Orange, Judd & Co.
9. Myrick—The Book of Corn. Orange, Judd & Co.
10. Fernow—Economics of Forestry. Crowell.
11. Green—Principles of American Forestry. Wiley & Sons.
12. Sargent—Corn Plants. Houghton.
13. Keeler—Our Native Trees. Scribners.
14. Waldo—Elementary Meteorology. A. B. C.
15. Tarr—Economic Geology of the United States. Macmillan.
16. Roberts—The Anthracite Coal Industry. Macmillan.
17. Martin—The Story of a Piece of Coal. Appleton.
18. Coman—Industrial History of the United States. Macmillan.
19. Industrial America. Scribner.
20. Hilgard—Soils. Macmillan.
21. King—Irrigation and Drainage. Macmillan.
22. Review of Reviews. May, 1907.
23. Schuyler—American Diplomacy.
24. Newell—Irrigation Institutions. Crowell.

See also—Congressional Directory—Census Reports—Bulletins from Agricultural Department.

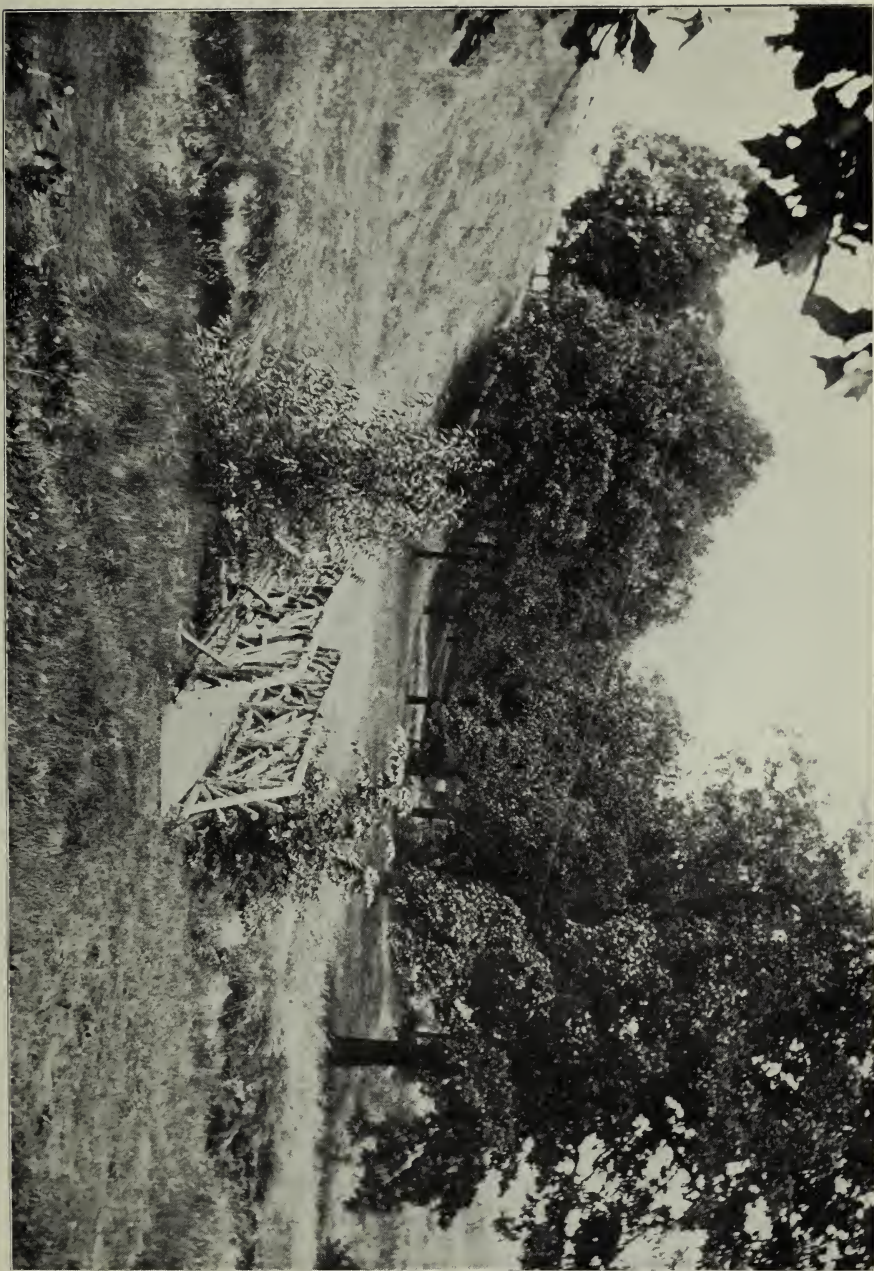
NATURE STUDY

Bird Studies.

Study economic phases. Such topics as "The Economic Value of the Bob White", "The Destructive Tendencies of the Crow", "Why a Bounty is Offered for Killing English Sparrows", etc., will be worked out.



THE LONG BRIDGE



THE SHORT BRIDGE

EIGHTH GRADE

Garden.

In continuing the use of the garden as a place of experimentation, attention will be given to the various means of plant propagation, budding, layering, etc. Pollenation by winds, insects and birds will be considered, and the general problem of cross fertilization will be investigated by experiment, using corn, petunia, pansies, etc. An account of the work of Burbank will be given in this connection. An effort will be made to create an interest in the general problem of biologic evolution through numerous references to the literature.

The insects and other pests of wheat and corn in Illinois will be considered in the light of reports from the Agricultural College and of experiments in the school garden and experiment plots.

A somewhat detailed study of soil fertility, the use of legumes and the great problem of artificial fertilizers will be made.

Physical Phenomena.

A study of the winds, storms, rainfall, temperature in their effect upon the economic questions of this and other regions, as referred to in the geography.

A study of the almanac—its essential phases. Principal constellations.

MATHEMATICS

The emphasis is on number as a means of analyzing the more intricate phases of common business procedure. Fully as much value is attached to the correct appreciation of the methods and processes of business as to technical number manipulation. It is expected that the pupil will leave the grade capable of using number as a tool to serve his purposes, and with a thorough mastery of all common number facts and processes.

New Number Theory.

Review of principles, considered generally, with special emphasis on reasonable short-cuts. General multiplication and division.

General theory of decimals, but actual use confined to "ten-thousandth" as the limit. General ideas of involution and evolution. Rational estimating. Theory of square root.

Material suggestive of typical live sources for problems:

Farming. Choice of crops; preservation and building up of farms; economics of spending freely; does it pay to own a

EIGHTH GRADE

farm?—wheat, corn, oats,—areas, average yield, prices, localities; rotation of crops, fertilizing, etc., noting especially local and state conditions. Much work based on our own gardening experiments.

House building, involving some study of forests, transportation, lumber yards, contracting, mechanics, wages and work. Also a study of relative values, costs, etc., of other building materials than lumber, as brick, concrete, etc. We build a model house.

Transportation. Wagon, steamer, train, electric cars; history, development, rates, etc. Kind and sizes of cargoes; speeds, etc., in connection with geography.

Rents. Does it pay to own a house?

Corporations. Stocks, bonds, private and public corporations, in simplest details.

National debt and methods of meeting national expenses—tariffs, revenues, etc.

National postal business.

Building and loan association business.

Life insurance business, simplest standard forms.

Measuring systems; their development; our system; the metric system.

Areas and volumes of similar figures.

Educational statistics.

Text books furnishing suggestive work most nearly fitting the child's needs are indicated at the close of the outline in mathematics for the sixth grade.

MANUAL ARTS

Problems arising from school and life needs. Broad relationships of work done to industrial life as a whole emphasized. Principles emphasized as much as consistently possible. Data in each field somewhat summarized and organized. As in all other grades, technical skill is duly subordinate to intelligent thinking on the meaning, significance and principles involved in each piece of work.

Sewing: Dressmaking and Millinery. Unlined waist or dress; study of cost, width, quality and relative value of cloth of different kinds; planning and cutting of material; styles appropriate to seasons, occasions and persons; color harmony

EIGHTH GRADE

in dress; dyeing; economics of dress. Making and trimming hats; study of materials as to cost, quality and relative value; styles appropriate to seasons, occasions, dress and persons; color harmony in head dress; economics of millinery.

Woodworking: Building a model of house using types of the most recent approved construction; coat hanger; tray; book rack; foot stool; plant stand; clock case; clay boards; modeling, tools; potter's wheel; window box. Models of cotton gin, mining tools, steamer, canal lock, windlass; pile driver, crane, bridge, telegraph instrument, etc.

Printing: General work as needed by the school, using the school press.

Drawing: Study of all the more fundamental principles developed through usage up to this time. Principles to be taught through work done and through the study of masterpieces. Toward the close of the year a definite effort to rationalize the drawing into the more fundamental principles is made. Illustrations in literature and history. Study of book and magazine illustrations and advertisements. Posters. Designs for wallpaper used in the house built, for stencils for cushion covers and for all projects made in other fields of hand work. Decorative design in especial connection with pottery study. Mural decoration studied.

Modeling: Relief forms for geography; tiles for wall decoration; vase forms in especial connection with pottery study. Statuettes and animal forms.

Picture Study and Study of Other Masterpieces of Hand Work. Representative pieces in all fields of handwork as in other grades. In the field of picture study, especial attention will be given to mural decoration and the mural painters of today in this country. Ancient and modern methods compared. The several historic schools of art will be studied in relation to typical painters and their paintings. Among the artists considered will be such typical painters as Raphael, Titian, Millet, Corot, Breton, Rubens, etc.

Cooking: Study of bills of fare with reference to definite food principles and food values. Planning typical menus, considering proper selection and preparation of meats, vegetables, soups, bread, pastries, fruits, salads, desserts, etc., which together will make a proper dietary. Carving and

EIGHTH GRADE

serving. Housekeeping: Furnishing the house with attention to expense, decoration, harmony of color and style, etc.

MUSIC

Sight Reading. Use the material listed in the seventh grade outline completing the third book of the Modern Music Series, Smith—Silver, Burdett & Co., Chicago. Reading of tenor and bass.

Art Songs. Continued as in seventh grade.

Scale Drills. Use chromatic scale.

Notation. Writing the chromatic scale in all keys.

Naming Intervals.

Chord Study. Simple chords studied and written.

Original melody construction with simple harmony added.

Program Music, Concert Music and *History of Music* given with the seventh grade. See the seventh grade outline.

Orchestral practice for those having musical instruments.

PHYSICAL TRAINING

The same outline used in the seventh grade will furnish material for the eighth grade. For material on Gymnastics and for games, see the references in the Appendix of this catalog.

Hygiene: Review of points in general and personal hygiene covered by the course outlined for the preceding grades. Special attention to protection against contagious diseases; disinfection; first treatment of wounds—cuts, burns, bruises, etc., sun stroke, fainting, etc.

GRADE IX.

The work of the ninth and tenth grades is not here outlined as is that of the lower grades. As these two grades constitute the first two years of the four year high school course required preparatory to entrance to the junior class of the Normal School, the catalog of the Normal School offers a general statement of the work to be given. A mere diagram of the work by quarters is here given. For a more adequate statement, see the Normal School catalog.

First Quarter.

English 1.. .. .	Composition and Rhetoric.
History 1.....	Greece and the Orient.

NINTH AND TENTH GRADES

Physical Science 1.... .Elementary Chemistry.
 Drawing 1Free Hand Drawing.
 Arithmetic—Elective.

Second Quarter.

English 2.....Composition and Rhetoric.
 History 2.....Rome.
 Physical Science 2.....Elementary Physics.
 Music 1Beginning Music.

Third Quarter.

English 3Composition and Rhetoric.
 Biology 1.....Botany.
 Geography 1.....Physical Geography.
 Manual Training 1

GRADE X.

First Quarter.

English 4.....Literature and Composition.
 Biology 2.....Zoology.
 Mathematics 1.....Algebra.
 Music 2.....Continuation of Course 1.

Second Quarter.

English 5.....Literature and Composition.
 Biology 3Physiology.
 Mathematics 2.....Algebra.
 Drawing 2.....Decorative Design and Modeling.

Third Quarter.

English 6.....Literature.
 Science.....Physical or Biological.
 Mathematics 3.....Algebra, through Quadratics.
 Domestic Science 1.

APPENDIX

List of Books and Publishers Referred to by Number and Otherwise.
For full address of Publishers, see list following.

I. PROSE.

1. Classic Myths, Judd..... Rand, McNally.
2. In Mythland, I and II, Beckwith..... Ed. Pub. Co.
3. In the Child World, Poulsson Bradley.
4. Hawthorne's Wonder Book..... Ed. Pub. Co.
5. Nature Myths, Flora J. Cook Flanagan.
6. Old Greek Stories, Baldwin Amer. Bk. Co.
7. Heroes of Asgard, A. and E. Keary..... Macmillan.
8. Story of Siegfried, Baldwin..... Scribners.
9. Language Reader, V. Baker-Carpenter..... Macmillan.
10. Norse Stories, Mabie..... Houghton.
11. Asgard Stories, Foster..... Silver.
12. Lights to Literature, II and III..... Rand, McNally.
13. Graded Literature Readers, II and III..... Maynard, Merrill.
14. Old Time Stories, Smythe..... Amer. Bk. Co.
15. Myths Every Child Should Know, Mabie..... Doubleday, Page.
16. Stories of Nibelungen, Schottenfels Flanagan.
17. Age of Fable, Bulfinch McKay.
18. Myths of Northern Lands, Guerber..... Amer. Bk. Co.
19. Wagner Opera Stories, Barber..... Pub. Sch. Pub. Co.
20. In the Days of the Giants, Brown..... Houghton.
21. Heroes of Myth, Gilbert..... Silver.
22. The Nine Worlds, Litchfield Silver.
23. For the Children's Hour, Bailey-Lewis..... Bradley.
24. Williams' Choice Collection, Bk. I..... Amer. Bk. Co.
25. How to Tell Stories, Bryant..... Houghton.
26. Fairy Tales Every Child Should Know..... Doubleday, Page.
27. Fairy Tales and Fables, Baldwin..... Amer. Bk. Co.
28. Andersen's Fairy Tales, Mrs. H. B. Paul..... Warren.
29. Grimms, Fairy Tales, Wiltse..... Ginn.
30. Classic Stories, McMurry..... Pub. Sch. Pub. Co.
31. Language Reader, III. Baker-Carpenter..... Macmillan.
32. Heart of Oak Books, III, Norton..... Heath.
33. Heart of Oak Books, II, Norton..... Heath.
34. The Fairy Ring, Wiggin and Smith..... McClure, Phillips.
35. Child Life Reader, II, Blaisdell..... Macmillan.
36. Bible Stories for The Young, Sheldon..... Welch.
37. The Bible.
38. The Child's Christ Tales, Hofer..... Proudfoot.
39. In Story Land, Harrison..... Sigma.
40. Book of Legends, Scudder..... Houghton.
41. Folk Lore Stories and Proverbs, Wiltse..... Ginn.
42. Child Life Reader, III, Blaisdell..... Macmillan.
43. Adventures of a Brownie, Mulock..... Harpers.
44. Arabian Nights,..... Warne or Longmans.
45. A Kindergarten Story Book, Hoxie..... Bradley.
46. Robinson Crusoe, McMurry..... Pub. Sch. Pub. Co.
47. Williams' Choice Collection, I, Inter..... Amer. Bk. Co.
48. Through the Year, I, Clyde-Wallace..... Silver.
49. The Story Hour, Wiggin and Smith..... Houghton.
50. Lobo, Rag and Vixen, Seton..... Scribners.
51. Wild Animals I have Known, Seton... .. Scribners.
52. Fanciful Tales, Stockton..... Scribners.
53. Beautiful Joe, Saunders..... Amer. Bap. Pub. Soc.
54. Fifty Famous Stories Retold, Baldwin..... Amer. Bk. Co.

BOOKS AND PUBLISHERS.

55. The Cyr Readers, III,.....Ginn.
56. Danish Fairy Tales, BayHarpers.
57. Old Stories of the East, Baldwin.....Amer. Bk. Co.
58. Thirty More Famous Stories, Baldwin.....Amer. Bk. Co.
59. Krag and Johnny Bear, Seton.....Scribners.
60. Black Beauty, Sewell.....Page.
61. Adventures of Robin Hood, Pyle.....Scribners.
62. Alice in Wonderland, Carroll.....Macmillan.
63. King Arthur and His Knights, Green.....Ginn.
64. Little Lame Prince, Craik.....Heath.
65. Nonsense Anthology, Anonymous.....Scribners.
66. William's Choice Collection, II, InterAmer. Bk. Co.
67. The Jungle Book, Kipling.....Century.
68. Story of Ulyses, Cook.....Pub. Sch. Pub. Co.
69. Water Babies, Kingsley.....Ed. Pub. Co.
70. Uncle Remus Stories, Harris.....Appleton.
71. Eaton Second Reader.....Eaton.

II. POETRY.

1. Songs of Tree Top and Meadow, McMurry.....Pub. Sch. Pub. Co.
2. Poems Every Child Should Know, Mabie.....Doubleday, Page.
3. Three Years with the Poets, Hazard.....Houghton.
4. The Posy Ring, Wiggin and SmithMcClure, Phillips.
5. Nature in Verse, Mary I. Lovejoy... ..Silver.
6. Poems of Childhood, Field.....Scribners.
7. Art Literature Readers, II, ChutterAtkinson, Mentzer.
8. Finger Plays, Poulsson.....Lothrop.
9. A Book of Nursery Rhymes, Welsh.....Heath.
10. A Child's Garden of Verse, Stevenson.....Scribners.
11. Language Reader, II, Baker-Carpenter.....Macmillan.
12. Child Life in Verse, Whittier.....Houghton.
13. William's Choice Collection, II, Prim.....Amer. Bk. Co.

III. SONGS.

1. Songs of the Child World, I, II, III, Gaynor...Church.
2. Small Songs for Small Singers, Neidlinger.....Bradley.
3. Folk Songs and Other Songs, Ditson.....Lyon & Healy.
4. St. Nicholas Songs.....Century.
5. The Eleanor Smith Primer,.....Silver.
6. New Education Music Course, I.....Ginn.
7. Rote Song Book, Replier and Tapper.....Amer. Bk. Co.
8. Singing Games.....Flanagan.
9. Songs and Scissors. Gaynor.....Summy.
10. Songs for Little Children, Smith.....Bradley.
11. Songs in Season, George.....Flanagan.
12. The Coda, Leaflets, PeriodicalGinn.

IV. PHYSICAL TRAINING. BOOKS ON THEORY.

1. Health and Strength, Sargent.....Caldwell.
2. How to get Strong, Blaikie.....Harpers.
3. Hygiene for Girls, Davis.....Appleton.
4. Physical Education, Sargent.....Ginn.
5. Physiology of Exercise, La Grange.....Appleton.
6. Power Through Repose, Call.....Little.
Free Exercise and Apparatus.
7. German-American Gymnastics, Stecker.....Lee.
8. Public School Gymnastics, Bancroft.....Kellogg.

BOOKS AND PUBLISHERS.

9. Public School Manuals, Suder.....McClurg.
Practical Games.
10. Gymnastic Games, Arnold.... .McClurg.
11. Indoor and Outdoor Gymnastic Games.....Spaulding.
12. One hundred-fifty Gymnastic Games.....Boston Normal.
13. Song Roundels and Games, Suder.....Ed. Pub. Co.

PUBLISHERS.

Post office Addresses of publishers of books and pictures referred to in the foregoing pages.

BOOKS.

Ainsworth & Co., 378-388 Wabash Ave., Chicago.
 American Baptist Publishing Society, 1420 Chestnut St., Philadelphia.
 American Book Company, 521-531 Wabash Ave., Chicago.
 American Publishing Company, 424 Asylum St., Hartford Connecticut.
 American Tract Society, 150 Nassau St., New York.
 Appleton D. & Co., 436 Fifth Ave., New York.
 Atkinson, Mentzer & Grover 238-240 Adams St., Chicago
 Bay View Pub. Co., Sold to Hurst & Co., 395 Broadway, New York.
 Black, A. L., London. Use McClurg, Chicago.
 Boston Normal School Gymnastics, Boston.
 Bradley, Milton, The Thomas Charles Co., 258-260 Wabash Ave., Chicago.
 Burt, A. L. & Co., 52-58 Duane St., New York.
 Caldwell, H. M. & Co., 208-218 Summer St., Boston.
 Cassell & Co., 43-45 East 19th St., New York.
 Century Co., 33 East 17th St., New York.
 Chautauqua Press, Chautauqua, New York.
 Church, John Co., Chicago.
 Crowell, T. Y. & Co., 426-428 Broadway, New York.
 De Wolf, Fiske & Co., 365 Washington St., Boston.
 Dodd, Mead & Co., 372 Fifth Ave., New York.
 Doubleday, Page & Co., 133-137 16th St., New York.
 Eaton & Company, Chicago.
 Educational Publishing Company, Chicago.
 Estes, Dana & Co., 208 Summer St., Boston.
 Fergus Printing Company, 22 Lake St., Chicago.
 Flanagan, A., 266 Wabash Ave., Chicago.
 Funk & Wagnalls, 44-60 East 23rd St., New York.
 Harper & Brothers, Franklin Square, New York.
 Heath, D. C. & Co., 110-120 Boylston St., Boston; also Chicago.
 Holt, Henry & Co., 378 Wabash Ave., Chicago.
 Houghton, Mifflin & Co., 4 Park St., Boston, also Chicago.
 Hurst, & Co., 395 Broadway, New York.
 Jennings & Pie, now Jennings & Graham, 220 West 4th St., Cincinnati.
 Laird & Lee, 263-265 Wabash Ave., Chicago.
 Lane, John, 67 Fifth Ave., New York.
 Lee & Shepard, Lothrop, L. & S., 93 Federal St., Boston. See Lothrop.
 Lippincott, J. B. & Co., Washington St., Philadelphia.
 Little, Brown & Co., Boston.
 Longmans, Green & Co., 91-93 Fifth Ave., New York.
 Lothrop, Lee & Shepard, 93 Federal St., Boston.
 Lovell, Frank F. Book Co., 66 Park Place, New York.
 Lyon & Healy, Chicago.
 Macmillan Co., 378 Wabash Ave., Chicago.
 Maynard, Merrill & Co., 44 East 23rd St., Boston.
 McClure, Phillips & Co., 44-60 East 23rd St., New York.
 McClurg, A. C. & Co., 215 Wabash Ave., Chicago.

BOOKS AND PUBLISHERS.

McKay, David; 610 Washington St., Philadelphia.
 Merrill, Chas. E. & Co., New York.
 Nelson, Thos. & Sons, 37-41 East 18th St., New York.
 New York World, New York.
 Old South Work, Directors of, Old South Meeting House, Boston.
 Orange Judd & Co., 439 Lafayette St., New York.
 Outlook Publishing Co., 287 Fourth St., New York. Sold to Macmillan.
 Oxford Press, Oxford, Pennsylvania.
 Oxford University Press, American Branch, 91 Fifth Ave., New York.
 Page & Co., 200 Summer St., Boston.
 Proudfoot, A. Hope, Auditorium, Chicago.
 Public School Publishing Company, Bloomington, Illinois.
 Putnam's Sons, G. P., 27, 29 West 23rd St., New York.
 Rand, McNally & Co., 169-174 Adams St., Chicago.
 Revell, F. H. & Co., 80 Wabash Ave., Chicago.
 Row, Peterson & Co., 215 Wabash Ave., Chicago.
 Sanborn, Benj. H. & Co., 120 Boylston St., Boston.
 Scribner's Sons, Charles, 153-157 Fifth Ave., New York.
 Sigma Publishing Co., 210 Pine St., St. Louis.
 Spaulding, A. G. & Co., Chicago.
 Spon & Chamberlain, 123 Liberty St., New York.
 Stanford, London. Use McClurg, Chicago.
 Stokes, F. A. & Co., 5-7 East 16th St., New York.
 Stone, H. S. & Co., Elbridge Court, Chicago.
 Summy, Clayton F. Co., 220 Wabash Ave., Chicago.
 University of Chicago Press, 58th St. and Ellis Ave., Chicago.
 University Publishing Co., 27-29 23rd St., New York.
 Warne, Frederick & Co., 36 East 23rd St., New York.
 Welch, W. M. Co., 179 Illinois St., Chicago.
 Whitaker & Ray Co., San Francisco.
 Wilde, A. E., Cincinnati.
 Wiley, John & Sons, 41-45 East 19th St., New York,

PICTURES, POTTERY AND CASTS.

American Tissot Society, 27 East 22nd St., New York. Tissot Bible Pictures.
 Birds and Nature Pictures, 350 Wabash Ave., Chicago. Colored Pictures.
 Brown, Geo. P., 38 Lovell St., Boston. Brown's Famous Pictures.
 Chicago Art. Ed. Co., 215 Wabash Ave., Chicago. Pictures and Pottery.
 Cosmos Pictures Company, 296 Broadway, New York. Cosmos Pictures.
 Hennecke, C. Co., Milwaukee, Wisconsin. Casts, statuary, etc.
 Montross Gallery, 372 Fifth Ave., New York. Montross Prints.
 Perry Pictures Co., Malden Massachusetts. Well known Perry Pictures.
 University Travel, Bureau of, 201 Clarendon St., Boston. University Prints.

Any of the above books may be gotten in one order through A. C. McClurg & Co., 215 Wabash Ave., Chicago. The Brown and Perry Pictures may be gotten of the Milton Bradley Company, represented by the Thomas Charles Company, 258-260 Wabash Ave., Chicago.

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Sequence of Material in Subjects by Grades.

Subjects	Grades	I	II	III	IV	V	VI	VII	VIII	IX	X
English		20	32	40	56	70	86	99	112	132	133
History		24	35	44	59	73	88	103	114	132	
Geography-Nature S.		27	36	48	63	76	89	105	115	133	133
Mathematics		28	37	52	67	82	96	108	129	133	133
Manual Arts		28	38	53	68	83	97	110	130	133	133
Music		29	39	54	69	85	99	111	132	133	133
Physical Training		31	40	55	70	85	99	111	132		

Courses of Study

of

The Academic and Normal School Divisions

Of The

Western Illinois State Normal School

THE ELEMENTARY SCHOOL

The Elementary School, consisting of the first ten public school grades, forms an integral part of the Normal School. It is also the Training School.

A statement of the aims and of the character of the work of the Elementary School is found at the beginning of the Course of Study for the Elementary School on page 1.

However, since the work of the 9th and 10th grades constitutes the first two years of the four year high school course required preparatory to the entrance to the junior class of the Normal School, the course of study in these two grades is here given in outline.

GRADE IX.

First Quarter.

English 1.....Composition and Grammar.
History 1.....Greece and the Orient.
Physical Science 1.....Elementary Chemistry.
Drawing 1.....Free Hand Drawing.
Arithmetic—Elective.

Second Quarter.

English 2.....Composition and Literature.
History 2.....Rome.
Physical Science 2.....Elementary Physics.
Music 1.....Beginning Music.

Third Quarter.

English 3.....Composition and Reading.
Biology 1.....Botany.
Geography 1.....Physical Geography.
Manual Training 1.

GRADE X.

First Quarter.

English 4.....Literature and Composition.
Biology 2.....Zoölogy.
Mathematics 1.....Algebra.
Music 2.....Continuation of Course 1.

Second Quarter.

- English 5.....Literature and Composition.
 Biology 3.....Physiology.
 Mathematics 2.....Algebra.
 Drawing 2.....Decorative Design and Modeling.

Third Quarter.

- English 6.....Literature and Rhetoric.
 Science.....Physical or Biological.
 Mathematics 3.....Algebra, through Quadratics.
 Domestic Science 1

THE ACADEMIC DIVISION

The Academic Division of the school corresponds to the 11th and 12th grades of a common school or the 3rd and 4th years of a good high school. In this school, students not fully prepared for the junior class of the Normal School may obtain the credits necessary for admission. Practically all of the work in this division is elective, that is any student may take any course offered for which he is adequately prepared. For convenience in the distribution of work advised for those requiring two years of preparation for entrance to the Junior class, the following sequence of courses is offered:

GRADE XI.

First Quarter.

- History 3.....Mediaeval Europe.
 Geography 2.....North America or Eurasia.
 Mathematics 4.....Plane Geometry.
 Domestic Art 1

Second Quarter.

- History 4.....Modern Europe to the French Revolution.
 English 7.....Reading.
 Mathematics 5.....Plane Geometry.
 Manual Training 2

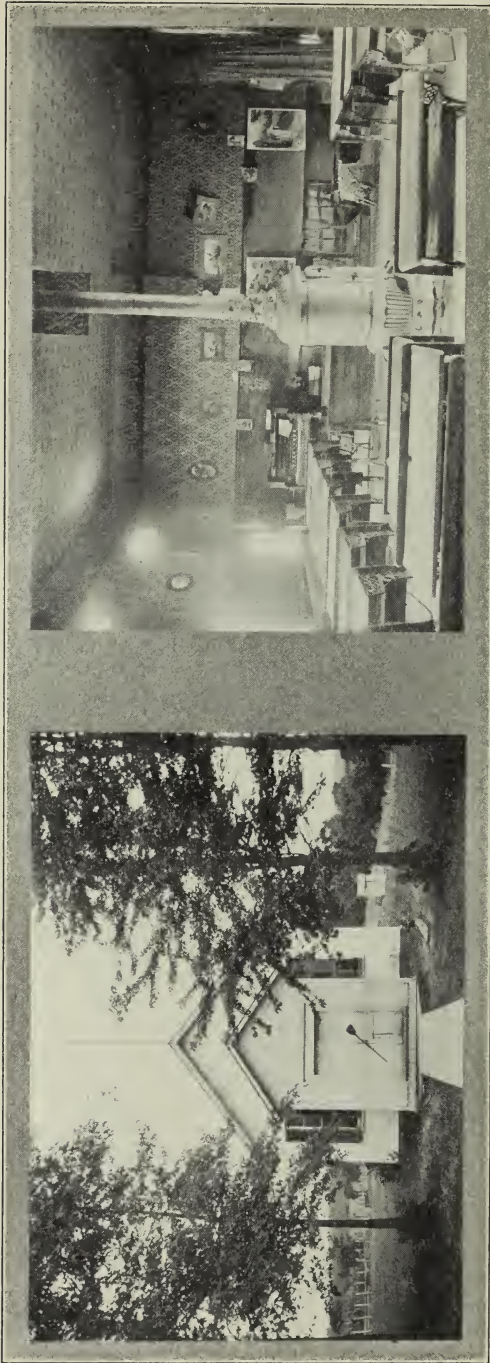
Third Quarter.

- History 5.....Modern England, 1603-1903.
 English 8.....Literature.
 Mathematics 6.....Solid Geometry.
 Music 3

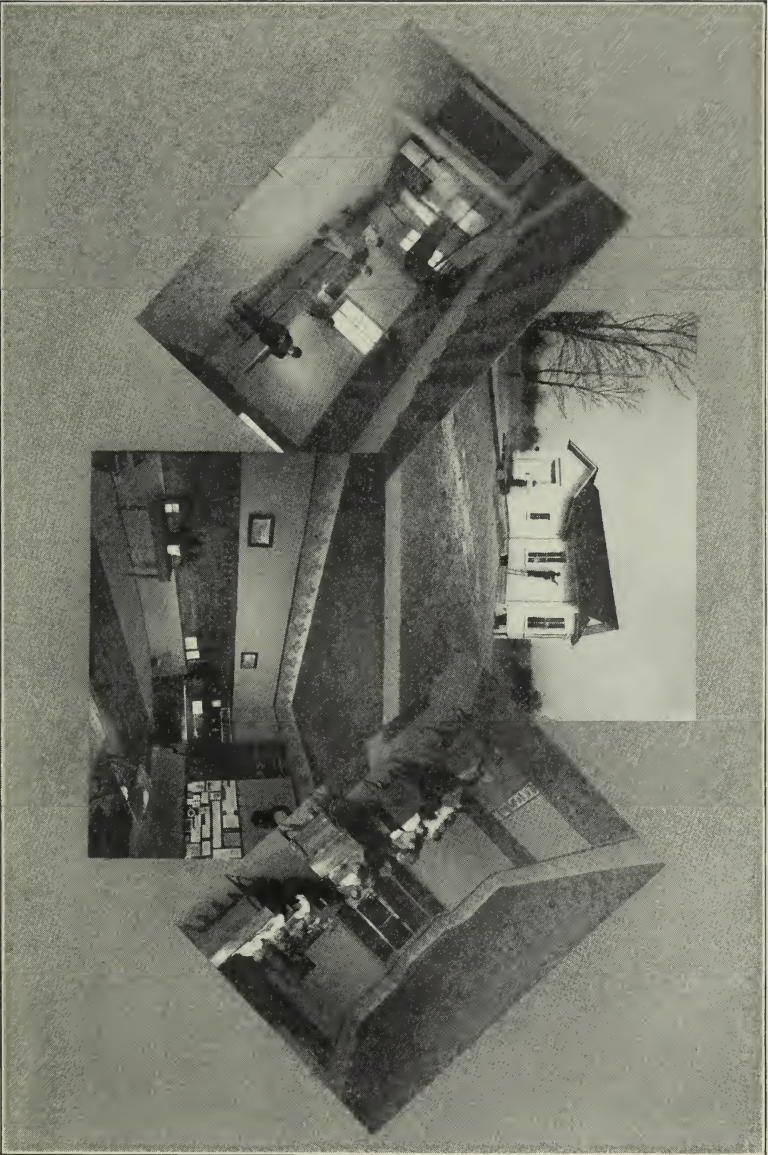
GRADE XII.

First Quarter.

- History 6.....American.
 Biology 4.....The Principles of Biology.



OUR COUNTRY SCHOOL, SEPTEMBER, 1906



OUR COUNTRY SCHOOL, MAY, 1907

Mathematics 7.....Modern Arithmetic.
Manual Training 3

Second Quarter.

History 7.....Industrial History.
English 9.....Literature.—The Drama.
Geography 3.....Commercial Geography.
Physical Science 3.....Physics.

Third Quarter.

History 8.....Civics.
Mathematics 8.....Modern Arithmetic.
Physical Science 4.....Physics.
Music 4

THEORY AND PRACTICE OF TEACHING FOR ACADEMIC STUDENTS

This course will be open to all Academic students and to any students of the ninth and tenth grades who have obtained a teacher's certificate by examination, who are obliged to teach in order to earn expense money to return for the Normal courses. For details of the course see Education 27 in the synopsis of Normal School courses, page 156

DESCRIPTION OF ACADEMIC COURSES.

The academic work offered in the several subjects is arranged to take the following sequence:

BIOLOGICAL SCIENCE

Biology 1.—Botany.

Prerequisite: Elementary Chemistry.

Third Quarter, Grade IX.

Biology 2.—Zoölogy.

Prerequisites. Elementary Chemistry; Elementary Physics.

First Quarter, Grade X.

Biology 3.—Physiology. A continuation of Biology 2.

Prerequisites: Biology 2; Elementary Physics.

Second Quarter, Grade X.

Biology 4.—Principles of Biology. A broad course, dealing with the essential evidences, data and factors of organic evolution.

Prerequisite: One year of biological science.

First Quarter, Grade XII.

DOMESTIC SCIENCE AND ART

Domestic Science 1.—Fundamental principles of food values, food preservation, food preparation and serving.

Prerequisites; Elementary Chemistry; Botany; Physiology.

Third Quarter, Grade X.

Domestic Art 1.—Textiles, weaving, sewing, dress making, millinery, home decoration, etc.

First Quarter, Grade XI.

Domestic Science and Art.—Electives. Special courses will be offered as needs arise, and as the time and conditions will permit.

DRAWING

Drawing 1.—Free Hand Drawing. Still life: Composition, arrangement, symmetry, etc. Work in pencil, charcoal, pen and ink, and water color.

First Quarter, Grade IX.

Drawing 2.—Decorative Design and Modeling. Ornament from geometric and nature forms; historic ornament; principles of harmony, rhythm, balance etc. Working drawings; pattern making; clay modeling.

Prerequisite; Drawing 1.

Second Quarter, Grade X.

Drawing—Electives. Special courses will be offered suited to demands as these arise, as far as possible.

ENGLISH

English 1.—Grammar and Composition. The study of technical grammar with practice in composition.

Text: Mead, English Grammar.

First Quarter, Grade IX.

English 2.—Literature and Composition. The reading of classics from which themes for practice writing will be drawn.

Text: Gardner, Kittridge and Arnold, Elementary Composition.

Second Quarter, Grade IX.

English 3.—Reading. Selections from standard literature for thought study, appreciation and training in expression.

Third Quarter, Grade IX.

English 4.—Literature. Chiefly American authors and classics. Poetry and prose selections from Bryant, Longfellow, Lowell, Whittier, Hawthorne, Cooper, Stevenson.

Text: Pancoast, Introduction to American Literature.

First Quarter, Grade X.

English 5.—English Literature. Essays and Orations from Addison, De Quincy, Macaulay, Webster and Lincoln. One written theme per week.

Second Quarter, Grade X.

English 6.—Rhetoric and Literature. Special emphasis upon composition drawn mainly from literary matter.

Third Quarter, Grade X.

English 7.—Reading. Study of articulation and pronunciation. Different styles of selections for the development of vocal energy and vocal purity. One play of Shakespeare's.

Second Quarter, Grade XI.

English 8.—Poetry and the Novel. Milton's shorter poems, and selected

pieces from Wordsworth, Coleridge and Tennyson. A brief history of the English novel. The reading and analysis of one work of fiction. Third Quarter, Grade XI.

English 9.—The drama. A brief history of the English drama and comparison of the Greek and the Shakespearean play. Two Greek plays and two of Shakespeare's will be read.

Second Quarter, Grade XII.

FOREIGN LANGUAGES

Four years of Latin and two of German are offered to those desiring work in foreign languages. No credit will be given for less than one year's work in any foreign language.

GEOGRAPHY

Geography 1.—Physical Geography. Text, laboratory exercises and field work.

Text: Gilbert and Brigham, Introduction to Physical Geography.

Third Quarter, Grade IX.

Geography 2.—North America or Eurasia. A detailed study of the physiographic regions. Economic and historical phases will be emphasized.

First Quarter, Grade XI.

Geography 3.—Commercial Geography. A standard text, government reports and other periodical literature.

Second Quarter, Grade XII.

HISTORY

History 1.—Greece and the Orient.

Text: Myers, Outlines of Grecian History.

First Quarter, Grade IX.

History 2.—Rome.

Text: Myers, Outlines of Roman History.

Second Quarter, Grade IX.

History 3.—Mediaeval Europe.

Prerequisite: History 2 and one year of high school work or two years of high school work.

Text: Robinson, History of Western Europe.

First Quarter, Grade XI.

History 4.—Modern Europe to the French Revolution.

Prerequisite: History 3 or three years of high school work.

Text: Robinson, History of Western Europe.

Second Quarter, Grade XI.

History 5.—Modern English, 1603-1903.

Prerequisite: History 4.

Text: Cheney, A Short History of England.

Third Quarter, Grade XI.

History 6.—American History.

Prerequisite: History 5 or two years of high school work.

Text: Hart, Essentials in American History.

First Quarter, Grade XII.

History 7.—Industrial History of the United States.

Prerequisite: History 6 or its equivalent.

Second Quarter, Grade XII.

History 8.—Elementary Civics of the State and Nation.

Text: Fiske, Civil Government of the United States, Green, Government of Illinois.

Third Quarter, Grade XII.

History 9.—Elementary Economics. Elective. Modern theories of production, transportation, rent, exchange and money. The most important schools of political economy. The tariff and the money question in American history. Banking. Labor organizations. Combinations of capital. The effect of monopolies upon prices. Immigration and the standard of living. Place of economics in the public school.

Text: Bullock, Elements of Economics.

Third Quarter.

MANUAL TRAINING

Manual Training 1.—Introductory Course.

Third Quarter, Grade IX.

Manual Training 2.—To follow Course 1.

Second Quarter, Grade XI.

Manual Training 3.—Work more advanced and specialized than Course 2.

First Quarter, Grade XII.

Manual Training 4.—Mechanical Drawing. Elective. Geometrical drawing and projection of solids. General principles underlying work. Applications in constructions of plans, details and parts of projects to be used in shop work. Cabinet, isometric and perspective drawing in relation to shop work.

Time to be arranged with instructor.

Manual Training 5.—Bench Work in Wood. Elective. Careful training in technical processes. Analysis of tool action. Care of tools. Study of properties of materials used. Planning of course in wood work adapted to the grammar grade students.

Time to be arranged with instructor.

MATHEMATICS

Mathematics 1, 2, 3.—Algebra through Quadratics. Emphasis on the real meanings of algebraic symbols and processes. General principles, not details, are considered the serious business of the course. Mere manipulation is discountenanced.

Text. Fisher and Schwatt, Complete Secondary Algebra.

First, Second and Third Quarters, Grade X.

Mathematics 4, 5.—Plane Geometry. Attempts to help pupils develop some real insight into relations of form. Power to penetrate data, to interpret conditions, to explain clearly the development of the solution and the meanings of the result, are counted all important. Repeat-

ing words without actual insight into conditions, is counted positively harmful.

Text: Beman and Smith, *New Plane and Solid Geometry*.

First and Second Quarters, Grade XI.

Mathematics 6.—*Solid Geometry*. Same comment and text as under Mathematics 4 and 5.

Third Quarter, Grade XI.

Mathematics 7.—*Modern Arithmetic*. An intensive study of some of the quantitative relations that are involved in, and interpret, modern business conditions. The emphasis is on the underlying principles that govern and facilitate business procedure, and on the vital elements that must be reckoned with in a business deal, rather than on the collection or consideration of actual data. This course will center around stock, bonds, banking, installments, insurance, taxes and governmental revenue, etc.

First Quarter, Grade XII.

Mathematics 8.—*Modern Arithmetic*. A continuation of Course 7, centering around farming, transportation, merchandising, building and contracting, small business enterprises, etc.

Third Quarter, Grade XII.

Mathematics 9.—*Advanced Algebra beyond Quadratics*. Elective. See Mathematics 1, 2, 3.

Mathematics 10.—*Trigonometry*.

Elective. The functions, their simple relations, and the solution of plane triangles.

Mathematics 11.—*Coordinate Geometry*.

Elective. The line, the circle, and the conic sections.

MUSIC

Music 1.—*Beginning Music*. Ear training; development of feeling for rhythm; teaching of rote songs to enable students to carry tunes; creating oral melodies to fit verses appropriate for that sort of treatment.

Second Quarter, Grade IX.

Music 2.—A continuation of course 1. Rhythm drills; tone testing; vocalization and tone placing; rote songs; notation of familiar rote songs; oral original melody constructions.

First Quarter, Grade X.

Music 3.—A continuation of course 2. Tone placing; sight reading of one or two-voice exercises and songs; melody writing; music history to accompany the songs studied; music history, ancient.

Text: *Modern Music Primer*.

Third Quarter, Grade XI.

Music 4.—A continuation of course 3. Open to Normal students having no previous definite music instruction. Ear training; rhythm drills; melody construction, oral and written; sight reading of treble and bass staff; song interpretation; study of song writing; music history of song and song writers; mediaeval music history and a careful study of folk songs: elementary history.

Text: Smith, Common School Book of Vocal Music.

Third Quarter, Grade XII.

Music—Electives. Special courses will be given as needs arise for them.

PHYSICAL SCIENCE

Physical Science 1.—Elementary Chemistry. The simpler theories of chemical changes, processes, and laws. The more practical problems of chemistry as related to common life and industry. A foundation course for elementary agriculture, physiology, physiography, geology, physics and advanced chemistry.

Text: Peters, Modern Chemistry.

First Quarter, Grade IX.

Physical Science 2.—Elementary Physics. The student will be introduced to many important laws of nature. Mechanics and machines will receive special attention.

Text: Higgins, Lessons in Physics.

Second Quarter, Grade IX.

Physical Science 3.—Physics: Electricity and Magnetism. Presented with laboratory work as in stronger four year high schools.

Prerequisite: Elementary Physics.

Text: Millikan and Gale, A First Course in physics.

Second Quarter, Grade XII.

Physical Science 4.—Physics: Heat, Sound and Light. A continuation of Physical Science 3, using the same text. This part of the course may be taken before the above if occasion requires.

Prerequisite: Elementary Physics.

Third Quarter, Grade XII.

Physical Science 5.—Advanced Chemistry. Elective. A careful study of the metallic and non-metallic elements; fundamental laws of the science; the application of chemistry to modern industries.

Prerequisite: Elementary Chemistry.

Text: Hessler and Smith.

PHYSICAL TRAINING

Courses throughout the year will be available in such number and variety as to accommodate all students electing this work. Calisthenics, gymnastics, athletics, out of door games and sports together with considerations of hygiene, will all receive due attention.

THE NORMAL SCHOOL

REQUIREMENTS FOR ADMISSION

1. Satisfactory evidence of the completion of a course of study covering a period of four years in an approved high school.

2. It is believed that a degree of scholarship equal to the foregoing is the minimum preparation with which it is safe to begin a systematic study of the art of teaching. The fact that many school districts are so organized that it is impracticable for them

to maintain the last two or three grades must be recognized and reckoned with. The Academic Division of the school is organized for the accommodation of students whose homes are in school districts of this class. Its purpose is to prepare students for admission to the junior class in the Normal School.

In estimating the value of a partial high school course, the unit considered is 90 school hours of *prepared* work. That is, the unit of work considered for an entrance credit is one study, with 5 recitations a week for 18 weeks. Twenty-four such units are required for admission. Credit will be given for partial preparation in accordance with the following valuations, when certified to by the class teacher and principal of an approved school.

Algebra.....	2 to 3	Credits
Biology.....	1 to 2	Credits
Botany.....	1	Credit
Chemistry.....	1 to 2	Credits
Civics.....	1	Credit
Drawing.....	$\frac{1}{2}$ to 1	Credit
English, Comp.....	2	Credits
English, Lit.....	2	Credits
French.....	1	Credit
Geometry.....	2	Credits
German.....	2 to 4	Credits
History.....	2 to 4	Credits
Latin.....	2 to 6	Credits
Music.....	$\frac{1}{2}$ to 1	Credit
Physics.....	1 to 2	Credits
Physiography.....	1	Credit
Physiology.....	1	Credit
Zoölogy.....	1	Credit

Blank forms for certificates of work done will be furnished when requested, except in music and drawing. In these branches the number of credits allowed will be determined by examination.

3. Holders of free township scholarships will be assigned, at entrance, to the 9th or 10th grade in the Elementary School. Students of sufficient maturity and strength will be advanced as rapidly as a due regard to their interest will warrant.

THE COURSE OF INSTRUCTION

The unit of work for which a Normal School credit will be given is 60 recitations of 40 to 50 minutes each, required from one to two hours preparatory study for each recitation. A year's work is 12 credits, which may be earned at the rate of 3 or 4 credits a quarter. No record will be made of work for which less than a half-credit is allowed. The certificate of graduation will be awarded *at the end of any quarter* to students who have earned 24 credits for

prepared work distributed as hereinafter provided; but the third credit for practice teaching will be withheld until it appears to a majority of the Head Instructors, including the Head Training Teacher, that the candidate is able to teach successfully in one or more grades of an elementary school.

The diploma cannot be granted to any candidate who has not done at least 12 units of work in this school.

Work done in excess of the requirements for the diploma, or evidence of special skill in teaching music, drawing, manual or household arts, etc., will be certified to.

Although the courses in the Normal School are offered in an order indicated by the following schematic form, any variations advisable to suit the needs of students may be made in their selection of work. It is the attitude of the Normal School ultimately to offer to any student any work which he needs at a time when he can take it.

JUNIOR YEAR

First Quarter.

Education 20.....	Psychology	1
History 20.....	History in the lower grades— Illinois... 1	
Manual Arts 20.....	Domestic Science and Art in the Grades.1	
Geography 20 A.....	Biological Nature Study in the Grades. .5	
Geography 20 B.....	Physical Nature Study in the Grades... .5	

Second Quarter.

Education 21.....	Principles of teaching	1
Geography 21.....	Geography in the Grades.....	.1
Manual Arts 21.....	Manual Training in the Grades... ..	1
Manual Arts 22.....	Blackboard Drawing.....	.4
Music 20.....	Music in the Grades6

Third Quarter.

Education 22.....	Class Teaching.....	1
English 20.....	English in the Grades.....	1
Geography 22 A.....	Physical Nature Study in the Grades... .5	
Geography 22 B.....	Biological Nature Study in the Grades.. .5	
Manual Arts 23.....	Drawing and Modeling in the Grades... .6	
Music 21.....	Music in the Grades.....	.4

SENIOR YEAR

First Quarter.

Education 23.....	History and Principles of Education.....	1
or		
Education 24.....	Room Teaching.....	2

English 21.....	Dramatization and Story Telling.....	1
Elective.....		1 or 2

Second Quarter

Education 23.....	History and Principles of Education....	1
or		
Education 24.....	Room Teaching.....	2
History 21.....	History in upper grades.....	1
Mathematics 20.....	Arithmetic in the Grades.....	1
Elective.....		1

Third Quarter.

Education 25.....	School and Library Administration....	1
Education 26.....	Sociology.....	1
English 22.....	Reading and Public Speaking.....	1
Elective.....		1

SUGGESTED ELECTIVES

For graduation, credits are required in all the subjects in the foregoing outline. To provide for the indicated electives, any of the courses in the Academic Division are open to election for Normal School students. However, for those who have not had all of the work indicated in the Academic Division, either in the outlined course or the electives, the following courses are suggested as especially desirable in the equipment of the teacher:

Elementary Agriculture	Government of the U. S.
Principles of Biology	Manual Training
Commercial Geography	Drawing
Arithmetic	Domestic Science
Industrial History	Domestic Art
Chemistry	Music

Upon the completion of 24 units of work for which credits have been allowed, and the regular diploma awarded, certificates of superior skill or teaching ability in any school art, or subject of study may be given, upon the recommendation of the head training teacher, approved by a head instructor or a special teacher.

ADVANCED STANDING AND GRADUATE STUDY

Students coming from other institutions in which work has been accomplished similar to that offered here will be given such credit and advanced standing as conditions warrant.

A graduate of any accredited college, university or normal school, who desires to receive a diploma from the Normal School, must attend its classes for three full quarters and complete not less than 12 units of work. Students entering on this basis will be privileged to select their work from any courses offered,—subject to the approval of the Principal. Special problems for research work in elementary education may be taken up by any students of graduate rank with the approval of the Principal. Certificates of attainment will be awarded upon the completion of any such graduate work.

SYNOPSIS OF NORMAL SCHOOL COURSES

EDUCATION

Education 20.—Psychology.

A general treatment of the fundamental questions of mental life. Special emphasis is placed upon those essentially connected with the science and art of teaching. In so far as possible, the work is based upon concrete observations of children and adults and numerous problems are taken up for solution by students through observations and experimentation.

Text: Thorndike's Elements of Psychology.

References: James' Talks to Teachers; Kilpatrick's Fundamentals of Child Study; numerous other texts and special articles.

First Quarter, Junior year 1 credit.

MR. BONSER.

Education 21.—Principles of Teaching.

A Study of the application of psychological principles and deductions in the learning and teaching processes. The more important contributions of child study examined and criticised. Pedagogical principles deduced and observed in practice in the Training School. Observation and criticism of plans and lessons. Lessons plans written, criticised and applied.

Prerequisite, Education 20.

Texts: Thorndike's Principles of Teaching; McMurry's Method of the Recitation.

References: DeGarmo's Essentials of Method; Rooper's Apperception; DuBois's Point of Contact in Teaching; numerous works on child study; and special topics in books on general pedagogy and in the periodical literature.

Second Quarter, Junior year 1 credit

MR. BONSER.

Education 22.—Class Teaching.

Teaching in the Training School is of two types, class teaching and room teaching. In class teaching, the student is responsible for one full credit period in the Training School for at least one term. Such teaching is under the close supervision of the training teacher and of the head of the department whose subject is taught. In all cases, courses in elementary psychology and the principles of teaching providing extended observation in the various grades, and the professional study of the subject to be taught, are required as a preparation for teaching, unless excuse is justified by previous training and experience.

Relative to the teaching work, weekly meetings are held by the several training teachers, head instructors, or director of the Training School for criticism and discussion.

Patrons' day is observed near the close of each quarter. Student teachers are expected to coöperate fully in making every phase of the Training School's work of the highest possible efficiency.

Third Quarter, Junior year 1 credit.

Education 23.—History and Principles of Education.

Educational systems of importance in the evolution of educational institutions. Systems studied as an expression of ideals of life and culture. Especial emphasis upon the great educators and upon the educational reform and progress of the last century. Present systems, conditions and tendencies examined and appraised. The aims, principles and limits of education examined and discussed. The leading theories and doctrines of education investigated. Present day motives and values discussed. The aims and methods of the elementary school especially emphasized.

Prerequisites; Education 20 and 21.

Texts: Dewey's *School and Society*; Dewey's *Ethical Principles Underlying Education*; Monroe's *History of Education*.

References: Bagley's *Educative Process*; O'Shea's *Education as Adjustment*; O'Shea's *Dynamic Factors*; Butler's *Meaning of Education*; Spencer's *Education*; Harris' *Psychologic Foundations*; Contemporary periodical literature

First or Second Quarter, Senior year 1 credit

MR. BONSER.

Education 24.—Room Teaching.

During the first or second quarter of the senior year each student is given entire charge of a room for one-half day. Students are placed as fully as possible upon their own responsibility. Such supervision is given as will most help them to develop independence, self reliance and initiative in excellence of teaching and school management.

First or Second Quarter, Senior year 2 credits

While one term of class teaching and one of room teaching are expected of the students of average capacity, the criterion is ability and attainment rather than time spent in the work. In some cases, less time might be required, in other cases more. The diploma of the Normal School will not be granted to any person who has not demonstrated the ability to teach successfully in one or more grades of the elementary school.

Education 25.—School and Library Administration.

This course will consist of two parts, one on library organization and development, the other on general problems of school administration and management. The library phase will consist of work based on problems of school room libraries in graded and rural schools. It will include: Library development; selection of books; use of books; and care of books, especially with reference to: Ordering and receiving; classification and marking; charging system; accession records; shelf list records; and principles of cataloging. Lectures, discussions, problems, readings and reports. Organization of typical libraries. Extensive use and acquaintance of books themselves.

In the school management phase, will be taken up questions of school hygiene, school organization, programs, grading and promotion, examinations, discipline, school decoration, the teacher and the community, school records, self improvement etc. Discussions, reading and reports.

References: White's *School Management*; Hinsdale's *Art of Study*; Dut-

ton's Social Phases of Education; Sabin's Common Sense Didactics; and appropriate periodical literature.

Third Quarter, Senior year 1 credit.

MISS DUNBAR AND MR. BONSER.

Education 26.—Sociology.

An elementary description of society. An examination of some of the principal forms of social organization. A study of the modes of thought, purposes, and virtues that make society possible. A consideration of the benefits that society confers and the conduct that worthy membership in society requires. Tendencies toward, and social movements for economic betterment. Some problems of social psychology. Conditions of social progress. The social phases of education. Other educational forces than the school. How these forces and the school may reinforce one another. An attempt to show to what extent and in what sense the school system is the key to the situation in American civilization.

Prerequisites: Education 20 and 23.

Text: Henderson's Social Elements.

References: Small and Vincent's Introduction; Fairbanks' Introduction; Giddings' Elements; Cooley's Human Nature and the Social Order; Dutton's Social Phases of Education.

Third quarter, Senior year 1 credit.

MR. BAYLISS.

Education 27.—The Art of Teaching and School Management.

An elementary course for the benefit of Academic students, not yet ready for the Normal School, but who are obliged to teach in order to earn expense money to return for the Normal courses. This special course is offered to any students in the 11th and 12th grades, or to 9th and 10th grade students who have obtained a teacher's certificate by examination. This is an accommodation course, purely. It cannot be credited as Normal School work, but, when well done, Academic credit may be given for it. The needs of country schools are especially kept in view.

Texts: Gillan's Abridgment of Page's Theory and Practice of Teaching; Sabin's Common Sense Didactics; The School Law of Illinois; The Illinois State Course of Study.

References: Kern's Among Country Schools; Wray's Jean Mitchell's School; Burrage and Bailey's School Sanitation and Decoration.

Second and Fourth Quarter.

MR. BAYLISS.

ENGLISH

English 20.—Language and Literature in the Grades.

Some of the problems of this course are: The relation of language and thought; verbal memory in children's work; formal language teaching; influences corrective of bad habits of speech; composition, oral and written; the need of literature in the child's life; the problems in learning to read; examination and appraisal of elementary school reading texts. Elements constituting a good primary reader. The Pollard and Ward system of reading. The place of phonics in learning to read. Various methods of

teaching reading investigated. Uses of the dictionary in the grades. These are to be worked out partly by study of the best literature on the subjects and partly through observation in the Training School. Half the term will be devoted to the selection, study, classification and gradation of children's literature.

Third Quarter, Junior year 1 credit.

MR. HURSH.

English 21.—The Drama, Dramatization and Story Telling.

This course will consist of two parts:

A. The drama and dramatization in which will be included a brief history of dramatic literature and the relation of the drama to child life. One or more Greek dramas and two of Shakespeare's plays will be studied. The method of work will be such as to exemplify the teaching and study of literature in the higher grades. Observation and discussion of lessons in literature in the Training School.

MR. HURSH.

B. Story telling and dramatization. The time is equally divided between methods in primary work and methods for the grammar grades. For the former, the work is based upon the use of stories, the art of story telling, and dramatization. For the latter, special emphasis is placed upon the following: That it is through the inspiration of *real* literature that the child's reading becomes direct and expressive; that the child feels no incentive to good reading unless his interest is aroused by recognizing the fact that all literature has in it thought and feeling of permanent value or pleasure; and that the chief aim is to aid the pupil without confusing with mechanical details, to grasp the thought and feeling of the whole for the sake of re-expressing it orally for its own pleasure or that of others. Observation in the Training School throughout the course.

References: Sarah L. Arnold's Learning to Read; McMurry's Special Method in Primary Reading and Special Method in the Reading of English Classics; Chubb's How to Teach English; Sara Cone Bryant's How to Tell Stories to Children; Allison and Perdue's The Story in Primary Instruction,

First Quarter, Senior year 1 credit.

MISS DAVIS.

English 22.—Reading and Public Speaking.

This course consists of work in oral expression and public speaking. The study is based upon the oral interpretation of narrative styles of literature, master piece orations, selections from the Bible, and one play of Shakespeare. Work is also given in extemporaneous speaking. The aim of this course is to enable the students to express before others in a natural effective way their own thoughts, and to interpret orally with adequate vocal expression the best things in literature. Numerous texts are used.

Third Quarter, Senior year 1 credit.

MISS DAVIS.

GEOGRAPHY

Geography 20.—Nature Study in the Grades.

This course, together with Geography 22, provides one term's work each in the biological and physical aspect of geography usually called nature study. The work is so divided as to provide the first half of the fall term and the second half of the spring term for the biological phases that the better opportunities for field excursions and garden work may be utilized.

A. Biological. The aims of nature study in the grades. Distinctions between the view point of the scientist and that of the educator in the study of animal and plant life. Motives for nature studies—economic, scientific, æsthetic, moral, spiritual. Relation of life forms and activities to the study of geography, to sciences, and to the life interests and activities of today. Collection and organization of data and materials. Organization of materials into a sequence suitable for the several grades. Correlation of biological nature studies. Discussion and valuation of nature study literature. Observation and discussion of nature study lessons in the Training School.

References: Hodge, McMurry, Jackson, Bailey, Chapman, and numerous bulletins and periodical literature.

MR. JOHNSON.

B. Physical. Emphasis upon such subjects as relate physical nature work most closely to geography as usually taught. A study of the solar system, and the relation of the earth to the same. Such facts and principles of chemistry as will aid the student in studying rocks, minerals, soils, weathering, oxidation, and allied subjects. Review of the simpler facts of meteorology and methods of presenting these in the various grades.

First Quarter, Junior year 1 credit.

MR. DRAKE.

Geography 21.—Geography in the Grades.

The nature and content of geography. Its relation to other sciences. Geographical controls and responses. The human element in geography. Geographical influences upon industrial and political history. A consideration of observational, representative, descriptive and rational geography. Excursions to illustrate the value of field work. Maps and models and their uses. Selection, elaboration and organization of geographical material. Course of study for the elementary school. Discussion and development of typical subject matter units and individual lesson plans. Observation and criticism of geography lessons in the Training School.

Prerequisite: Geography 2 or its equivalent.

Text: Redway's *The New Basis of Geography*:

Second Quarter, Junior year 1 credit.

MR. SUTHERLAND.

Geography 22.—Nature Study in the Grades.

A. Physical. A continuation of Geography 20 B. A discussion of physical nature work for the different grades and how the subjects selected may best be presented. Laboratory work in which students will have practice in fitting up simple experiments. How phases of physical nature work may

be carried on with a minimum of apparatus. Relation of physical nature study to the industrial and commercial world. Observation and discussion of nature study lessons in the Training School. An investigation of nature study literature. No single text will be used but a variety of reference work will be extensively consulted.

MR. DRAKE.

B. Biological. A continuation of Geography 20 A. Especial attention to the work of the school garden, elementary agriculture, and other phases of biological work so abundant in the spring months. The educational view point will constantly be kept in mind and a close correlation between the work of this class and the nature work of the grades will be observed. Excursions, collections, readings, observations and reports. References as in course A.

Third Quarter, Junior year 1 credit.

MR. JOHNSON.

Geography 23.—Elementary Agriculture.

This course is to subserve two purposes: To furnish students with such materials of the subject as will provide sufficient data to interpret the deductions set forth by Agricultural Colleges and Experiment Stations, and, as far as possible, to give students opportunity to become intelligent in the practice of agriculture fundamentals; to treat the subjects from the point of view of the elementary school teacher, endeavoring to develop ability to organize and adapt the material to the needs of the public schools. The work will be made practical by visits to farms and by work in an experimental garden.

Prerequisites: Elementary physics; elementary chemistry; physiography; one year of biological science.

Elective.

Third Quarter 1 credit.

MR. JOHNSON.

Geography—Electives.

See Academic courses in Geography, page 147.

MR. SUTHERLAND.

HISTORY

History 20. A—History in the Lower Grades.

B—History of Illinois.

A. History in the lower grades. The aim and purpose of history study in the elementary schools. Wherein the educator's point of view in history study is different from the historian's. A discussion of a logical and practical course of study for the first six grades of the elementary school. Selections of material in connection with the course of study. Preparation of a working bibliography. How to judge text books. Practice in adapting historical material for use in the various grades. Special day programs. Correlations of history with geography, manual activities, and literature. Observation and discussion of work in the elementary school.

Teaching children how to study history. Recitations, assigned library work, lectures, observations and discussions.

B. History of Illinois. This is a half course alternating from time to time with history 20 A. The major part of the time will be spent upon the history of Illinois since 1775. A constant effort will be made to show the relation of events in the state to events in the nation at large, as it must not be forgotten that American history is a unity. The large part of the reading will be done in the library. Practical work in connection with questions, what to do with Illinois history in the schools, and where to find material.

Prerequisite: Some good course in American history.

Text: Smith's History of Illinois.

First Quarter, Junior year 1 credit.

MR. DICKERSON.

History 21.—History in the Upper Grades.

Instead of attempting a survey of the entire field, either in a connected way or by selected topics, some particular period will be bestudied intensively. These periods will not be the same but will vary from year to year. Each student will be required to become familiar with the chief primary and secondary sources of information for the period and know from experience how to work out an historical problem in the library. Special attention will be given to the questions of method in teaching and in study for the seventh and eighth grades. The practical problems of the selection and organization of material, planning lesson units, and judging text books. Civics in the elementary school. Observation of the work in the above grades in connection with the discussion of plans for particular lesson units.

Texts: Channing's Students' History of the United States; one volume of Macdonald's Select Documents.

Second Quarter, Senior year 1 credit.

MR. DICKERSON.

History 22.—Government of United States.

The complexity of the conditions of American political life. The individual citizen, his rights and duties. Immigration, its problems and how it effects local government and school problems. Naturalization. The political party and its methods. Manner of conducting elections. Methods of legislation. The executive departments and their work. Foreign relations and treaties. The judiciary and how it declares laws unconstitutional. City governments and their peculiar problems. Importance of local government. Our territorial problems and the way we are solving them. The position of civics in the school course.

Prerequisite: A satisfactory course in elementary civics.

Text: Hart's Actual Government.

Elective.

Second Quarter. 1 credit.

MR. DICKERSON.

MANUAL ARTS.

Manual Arts 20.—Domestic Science and Art in the Grades.

Aims and purposes of this work in the elementary school. Relation to

the technical trades, industries and activities to which it introduces the student. Motives controlling the selection of material and character of the work. Relation to the other subjects of study. Development of a selection and sequence of material adapted to the several grades with methods of presentation. Planning of the work with a minimum of equipment. Means and methods of introducing this work where it does not now exist. Relation of the subject to industries on the one hand and to arts on the other. Typical phases of work suitable for the grades developed in the laboratory and work rooms. Observation and discussion of work in the Training School.

First Quarter, Junior Year 1 credit.

MISS COLBY.

Manual Arts 21.—Manual Training in the Grades.

This course embraces a study of the history and development of the subject. Relation to other subjects. Relation to the great trades and industries to which this work introduces the pupil. Fundamental principles. Study of adaptation to grade and method of presentation. A close study of materials and tools with view of adaptation to elementary schools. Planning equipment to meet conditions. Observation and discussion of lessons in the Training School.

Text: Salomon's Theory of Educational Sloyd.

Second Quarter, Junior year 1 credit.

MR. BURCH.

Manual Arts 22.—Blackboard Drawing.

Blackboard drawing an added source of power to the teacher in the expression and clarification of ideas. Illustrations of simple stories. Representations of buildings; furniture; plants; fruits; animals, at rest and in action; human activities; landscapes; simple pieces of machinery, apparatus, etc. Chalk modeling. Adaptations of blackboard drawing, to the needs of the several grades. Teaching children to make blackboard drawings. Values and limitations of blackboard drawing from an educational standpoint. Observation of work in the Training School.

Text: Blackboard sketching.—Whitney.

Second Quarter, Junior year $\frac{2}{3}$ of 1 credit.

MISS BUCKNER.

Manual Arts 23.—Drawing and modeling in the Grades.

Aims and purposes of drawing and modeling in the elementary school. Distinction between the viewpoint of the educator and of the artist. Relation to other subjects. Drawing and modeling forms of expression comparable with English and music. Varieties of media usable in the elementary school—crayon, pencil, charcoal, ink, water colors, clay, etc. Methods and principles of using each in the grades. Appropriate materials and motives for each of the grades. Development of the art sense in children. Degree of excellence to be expected of children. Cultivation of creative power in the child. Cultivation of appreciation. The place and method of picture study in the elementary school. Selection of a graded sequence of masterpieces for picture study. Place and

method of biographical studies of the masters in art. Uses of masterpieces in studying the principles of drawing. Typical lesson units and plans for the various grades. Observation and discussion of lessons in the Training School.

Third Quarter, Junior year $\frac{1}{2}$ of 1 credit.

MISS BUCKNER.

MATHEMATICS

Mathematics 20.—Arithmetic in the Grades.

The origin and meaning of number and its development in race and child experience. The essential processes in number relations and their relative importance. Interpretations and meanings of certain general "rules." A rational course of study based on the child's experiences and needs. Discussion of present topics and methods. Criticism of present "examples." Criticism of texts. Study of typical good examples with criteria for judging. Observation and discussion of lessons in the Training School.

Prerequisite: Mathematics 7 or 8, Modern Arithmetic, or the equivalent of one of these.

Second Quarter, Senior year 1 credit.

MR. ARNOLD.

Mathematics—Electives.

See Academic courses, Modern Arithmetic, Advanced Algebra, Trigonometry and coördinate Geometry, page 149.

MR. ARNOLD.

MUSIC

Music 20.—Music in the Grades.

Aims and purposes of music in the elementary schools. Music a form of expression comparable to literature and art. Advanced theory and elementary harmony. Care and development of the child's voice. Study of music form and composition. Composition by children. Cultivation of creative power in children. Cultivation of musical appreciation. Methods of teaching public school music. Graded selection of music for children. The place of the history of music in the elementary school. Observation, teaching and discussion of lessons in music in the Training School. The course of study in music for the elementary school.

Prerequisite: Music 4 or its equivalent.

Texts: The modern music Primer, Common School Book of Vocal Music.

Second Quarter, Junior year $\frac{1}{2}$ of 1 credit.

MISS SHAMEL.

Music 21.—Music in the Grades.

A continuation of Music 20.

Third Quarter, Junior year $\frac{1}{2}$ of 1 credit.

MISS SHAMEL.

PHYSICAL TRAINING

Work will be offered every quarter in physical training. A well equipped gymnasium with baths and dressing rooms, as well as excellent athletic fields and other out of door facilities are at the disposal of students. Games and sports are encouraged as far as they are of hygienic and educative value. Opportunity will be provided for systematic instruction in the means for keeping the body in health, for maintaining normal, progressive growth and development, for securing grace in posture, carriage and action, and for developing a disposition to enter, with pleasure and profit, the various recreations so necessary in any phase of a successful life. There will be discussed the value and place of adequate periods of rest, of games, gymnastics, calisthenics, and out-door exercises and athletics, in the elementary school. Adequate attention will also be given to questions of general and personal hygiene,—dietetics, cleanliness, care of teeth and skin, fatigue, sleep, protection against contagion, treatment for accidental mutilations, and other items necessary to the care and preservation of a healthy body.

OUTLINE OF THE COURSE.

Theory:—Measurements and tabulation of bodily defects.

History of gymnastics. Their relation to and effect on the work done in the class room.

Methods:—Educational play and its value.

Corrective and remedial exercises.

Anatomy, physiology and hygiene in a practical way in connection with use and adaptation of all exercises.

Supplementary reading. See list in Training School catalog, Appendix, page 135.

Practice:—Marching.

Class formations.

Military drill.

Swedish and German free hand work.

Rhythm work and fancy steps.

Light apparatus work:—clubs, bells, wands, balls, etc.

Heavy apparatus work:—horizontal bar, rings, stall, bars, etc.

Pyramid building and mat work—boys.

Adaptation of exercises and games to the school room.

All work classified as to use in primary and grammar grades.

MISS LAMKIN.

Outdoor Athletics—Field and Track Work.

Golf, tennis, archery, base ball, foot ball.

MR. BARNETT.



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Sequence of Material in Subjects by Grades.

Subjects	Grades	I	II	III	IV	V	VI	VII	VIII	IX	X
English		20	32	40	56		86	99	112	132	133
History		24	35	44	59	73	88	103	114	132	
Geography-Nature S.		27	36	48	63	76	89	105	115	133	133
Mathematics		28	37	52	67	82	96	108	129	133	133
Manual Arts		28	38	53	68	83	97	110	130	133	133
Music		29	39	54	69	85	99	111	132	133	133
Physical Training		31	40	55	70	85	99	111	132		

Illinois
State
Reformatory
Print